

COLUMBIA LIBRARIES OFFSITE  
HEALTH SCIENCES STANDARD



HX64132005

RG381 J49

Lectures on cancer o

# RECAP

# CANCER OF THE UTERUS

---

*F. B. JESSETT*

BAILLIÈRE TINDALL & COX

RG381

J49



COLUMBIA UNIVERSITY  
EDWARD G. JANEWAY  
MEMORIAL LIBRARY



Dr. William Notkyne Seymour,  
105. Second Street.  
Troy. N. Y.  
1896.

LECTURES  
ON  
CANCER OF THE UTERUS.

[DELIVERED AT THE CANCER HOSPITAL, BROMPTON.]

WITH CASES.

BY

FREDERIC BOWREMAN JESSETT, F.R.C.S.,  
SURGEON TO THE CANCER HOSPITAL, BROMPTON.



LONDON :  
BAILLIÈRE, TINDALL AND COX,  
20 & 21, KING WILLIAM STREET, STRAND.

1894.

JANEWAY  
43-2615-

RG 381  
J49

## P R E F A C E.

---

THESE lectures, which were delivered at the Cancer Hospital, Brompton, contain a brief description of the different forms of malignant disease of the uterus, their symptoms and treatment, with a pretty full account of the different operations for the removal of disease, as it is found existing in different parts of the organ.

The relative merits of the operation of vaginal hysterectomy and supra-vaginal amputation of the os and cervix are discussed: and in those cases in which neither of these operations are applicable, the method of applying caustics for the destruction of the disease, or the amelioration of symptoms, is described.

In illustration of the treatment advocated, short notes of cases operated upon by the author are appended.

1, BUCKINGHAM PALACE MANSIONS, S.W.,  
*September, 1894.*

Digitized by the Internet Archive  
in 2010 with funding from  
Open Knowledge Commons

<http://www.archive.org/details/lecturesoncancer00jess>

LECTURES ON CANCER OF THE UTERUS.  
DELIVERED AT THE CANCER HOSPITAL, BROMPTON.

BY FREDERIC BOWREMAN JESSETT, F.R.C.S.,

Surgeon to the Cancer Hospital, Brompton.

LECTURE I.

I HAVE chosen the subject of cancer of the uterus for my lectures, as it is one of the most frequent forms in which the disease comes under our notice, and those who have had any experience of the disease will agree that it is one of the most fearful scourges that suffering women are heir to. I would urge upon you then, with all the force in my power the importance of most careful examination of all cases, and special attention to the smallest detail and symptom which may lead you to suspect the possibility of the existence of the disease.

Age plays an important part, as cancer of the uterus, like cancer of other parts of the body, is far more commonly met with between the ages of forty and fifty than at any other period. This period is that in which all the organs appear to commence to degenerate or atrophy, and it would seem to be that time of life when cancer is specially prone to take root in the system.

At the Cancer Hospital out of 860 cases of cancer which I have tabulated, 476 occurred between the ages of forty and sixty years of age.

	20—30	30—40	40—50	50—60	over 60	Total.
Author ...	31	104	223	253	249	860
Godson .	30	165	233	136	36	600
Total...	61	269	456	389	285	1460

Dr. Godson, in six hundred cases he collected at St. Bartholomew's Hospital, has noticed the same average; age, therefore, is an important factor, and in any case of a woman suffering from haemorrhage between the periods, between the ages of thirty and sixty, a vaginal examination should be insisted upon.

In the first place I propose to discuss some of the remote symptoms which are often present, and frequently are treated for more or less lengthened periods without any suspicion of uterine mischief existing. When attention is, however, attracted to the uterus, some condition such as ante- or retro-flexion, erosion of the os, metritis or incipient carcinoma is discovered: by treating these conditions the symptoms which have been so long a source of trouble disappear.

Now I have no doubt that many cases of incipient granular erosion of the cervix or chronic inflammatory conditions of the endometrium are frequent precursors of cancer, and that by neglecting these minor diseases grave mischief may result which will endanger the patient's life.

In studying the symptoms of uterine troubles one cannot but be struck at the similarity of the symptoms displayed by patients, whether they are suffering from chronic metritis, endometritis, fibro-myoma, or early stage of cancer. Possibly it will be only by close examination that any difference in character or intensity is discovered. And yet, although the general group of symptoms are so alike, it will be found that each form of disease has its own particular symptom more prominently developed—*i.e.*, hæmorrhage in cases of myomata; nervous disorders and pain in those of displacements; and leucorrhœal discharge and hæmorrhage in erosion of the os and cancer.

As, then, cancer of the uterus is often accompanied by displacement, endometritis, and occasionally with fibroids, it is readily seen what difficulties there are to contend with in arriving at an accurate diagnosis.

*Leucorrhœal* discharge is, I believe, the earliest symptom present in cancer of the uterus, whether commencing at the fundus or at the cervical canal, and this can be readily understood when one remembers that cancer commences in the epithelium lining, the uterine cavity and the glands of the mucous membrane, so that the irritation, the result of the disease, causes a certain amount of endometritis resulting in a catarrhal condition of the mucous membrane lining the cervix, or the uterine cavity.

Leucorrhœa, then, is an exaggerated and morbid alteration of the physiological vaginal and uterine secretions; for, normally, there is always a certain amount of secretion from the mucous membrane lining of both the vagina and

uterus, when this becomes increased or purulent then the term leucorrhœa is applied to it. Vaginal leucorrhœa is a fluid milky secretion which only stiffens linen slightly: it is acid in reaction. Uterine leucorrhœa is yellowish white and only slightly viscid: that from the cervix is gelatinous; normally, it resembles white of egg. It stiffens linen considerably: it is alkaline in reaction.

It is with the uterine leucorrhœa that we are at present interested and no doubt this is the earliest evidence or symptom that mischief of some sort exists in the uterine cavity. Now leucorrhœa in itself is only a consequence of some catarrhal condition of the mucous membrane lining the cervix or cavity of the uterus, and, on examination with the speculum, will be seen exuding from the canal as a viscid gelatinous liquid. But if after treatment this does not abate, then it may be suspected that something more than simple catarrh exists. In cases of carcinoma it will be noticed that the secretion becomes more liquid and yellowish, and with occasionally streaks of blood mixed with it, later a further change takes place and the discharge becomes watery, sanguous, and badly smelling.

Besides this local early manifestation there are several other symptoms, the result of reflex irritation, which manifest themselves in neighbouring organs. These symptoms doubtless exist in nearly all affections of the uterus to a greater or less extent, but they must be borne in mind, as it is by having attention called to the uterine affection and by careful examination that we may hope to recognize this terrible disease in its early stage and so be able to deal with it when there is the possibility of doing so.

The most common symptom of these neighbouring organs is connected with the bladder. Women experience a frequent desire to micturate, and frequently suffer from vesical tenesmus: and occasionally cystitis supervenes.

Constipation is frequently complained of, this is the result of the constantly deferred action, as the act of defæcation is accompanied by much pain, therefore patients get in the habit of restraining themselves as much as possible.

*Uterine dyspepsia* is a most constant symptom of uterine irritation, and one the importance of which cannot be over-estimated. The overlooking of this symptom has

often resulted in grave disaster—and yet how easy it is to connect the disease of the uterus to the digestive system, if it is only borne in mind the close relation of one to the other through the sympathetic nervous supply. If it is remembered the close connection between the gastric irritation, as exemplified by nausea and vomiting, connected with the early stages of pregnancy, it can be readily understood how constant uterine irritation may be the cause of reflex digestive disorders.

This subject has been recognised by gynaecologists now for a length of time, and it is no uncommon thing for a patient to consult one after they have been the round of the general physician, and been treated for a considerable period for ordinary dyspepsia, when on careful examination it is found that she is suffering from extensive erosion of the os; flexion of the uterus; or metritis, and possibly carcinoma.

I will not detain you by alluding to other reflex symptoms, such as respiratory reflexes; reflexes of the cerebral and peripheral nervous systems, neuroses of genital origin, but these must be always borne in mind as possibly being due to some uterine trouble.

So much then for the early general and local symptoms which may result from uterine irritation, and which, if thoroughly recognised, may be the means of our discovering cancer of the organ before it has advanced so far as to be beyond our control.

It will be convenient here to define exactly what is meant by the term cancer, and for this purpose I will adopt the definition of Dr. John Williams, as given to it by one school of pathology.

Cancer then is a new growth, possessing malignant properties—i.e., it possesses the power of invading neighbouring tissues, and of reproducing itself in the form of secondary growths in other and distant parts. By accepting this definition it will be seen to embrace all forms of malignant disease, whether carcinoma, sarcoma, or epithelioma.

*Sarcoma* is a growth of the connective tissue type, and invariably, I believe, commences in the structure of the connective tissue in the body of the uterus. Although this form of malignant disease is usually present in young subjects, when affecting different parts of the body, in the

uterus it is very frequently found in elderly patients. During the last few months I have had three patients suffering from this form of disease, all of whom were over sixty years of age. I believe that sarcoma attacks the uterus much more frequently than has generally been thought. Since I have taken especial interest in uterine cancer I have found that quite a third or fourth of the cases of malignant disease of the body of the uterus are sarcoma.

*Carcinoma*.—All carcinomata contain epithelial elements and are formed of epithelial cells bound together by a network of vascular connective tissue, or to put it in another way, all these tumours are formed of bands of connective tissue which interlace with each other, forming a network or framework between the meshes of which are packed groups of epithelial cells of different shapes. Carcinoma usually commences in the cervical canal or body of the uterus, either from the lining mucous membrane or the glands in the mucous membrane.

*Epithelioma* is of rare occurrence and when present always originates on the external os.

It will considerably facilitate the description of the different forms of cancer as they affect the organ, and indeed it is necessary for an intelligible description to divide the uterus into three portions—viz., *the vaginal portion*; *the cervical portion*; and *the body*.

*The vaginal portion* embraces that portion only which its name implies, and is limited above by a line drawn from the external orifice to the insertion into the vagina. This part is covered with squamous celled epithelium, this form of epithelium ends at the external orifice, and then the transitional commences, which, as Dr. John Williams observes, often disappears and is replaced by a glandular erosion which is covered with columnar epithelium, and the columnar epithelium meets the squamous without the interposition of the transitional form.

*The cervical portion* is limited below by the vaginal portion, and above by a line drawn transversely through the inner orifice. At this point the columnar epithelium ends and the tubular glands characteristic of the decidua begins.

*The body of the uterus* is that portion which is situated above the cervix. Cancer, as it affects either of these parts,

may present different characters, and may be classified as scirrhus, encephaloid, medullary, epithelioma and sarcoma, but it is not so much of the different forms of cancer that I propose to speak, as to the parts in which they originate and are located.

*Cancer of the vaginal portion.*—The disease is rarely found to originate on this portion of the organ, this has been fully borne out by the researches of Ruge Veit, John Williams, Schroeder, Leopold and others; although the disease frequently invades the part by growth from the cervical portion.

When it does exist I believe it nearly always originates in some crack or erosion of the os which has been the source of irritation. Patients suffering from cancer of the *portio vaginalis* often have no symptoms whatever to lead them to suspect the presence of the disease. Although they undoubtedly have suffered from leucorrhœal discharge for some considerable time. Yet this is such a common complaint with women that they take but little notice of it, and probably the first, or at any rate, the usual symptom that attracts attention is haemorrhage, sometimes occurring spontaneously, sometimes after coitus, and yet, many of the cases, when an examination is made, are found to be suffering from extensive disease, perhaps the walls of the vagina being implicated.

If these cases had been examined at an earlier stage how much could have been done, possibly erosion of the os or fissures is the precursor in many of these, and how difficult it is in such cases even by most careful examination to decide when the erosion or fissure has taken on a cancerous action, but yet how important it is for the welfare of the patient that a correct diagnosis should be formed. And here I would counsel you that in all cases of doubt to remove a small portion for microscopic examination, and if any doubt exist as to its true nature to at once perform amputation of the neck of the uterus well above the diseased parts. Practically, there is no risk in such an operation, and I am of opinion that in all cases where there is extensive erosion and cracking with thickening and infiltration of the tissues of the cervix, that it is good practice to remove it by amputation. The form of cancer that is most commonly found attacking the *portio vaginalis* is "epithelioma."

*Cervical portion.*—We must now pass on to the consideration of the disease as it attacks the cervical portion. Here again it is most difficult clinically to differentiate between an erosion, an adenoma, and carcinoma. In what way clinically does one differ from the other? Dr. John Williams describes an erosion as an extension of mucous membrane of the cervical canal through the external orifice on to the lips, which are, in health, covered with stratified epithelium. In some cases, no doubt, simple hypertrophy of the mucous membrane of the canal resembles an erosion. A true erosion, however, is described as consisting of a structure like that of the mucous membrane of the cervix placed on a surface which, in health, is covered by squamous epithelium. It may be and often is associated with hypertrophy of the mucous membrane at the lower part of the canal. It contains glands lined by columnar epithelium, and its surface is covered by epithelium of the same character.

An erosion differs from cancer in that the epithelium on its surface and lining, its glands consists of a single layer and assumes no aberrant forms; and from an adenoma of the cervix in that the glands are comparatively superficial. It will be seen then that in erosion the glands are considerably increased in size and number, and I have but little doubt that many cases of cancer of the cervix commence as erosion, for not only do these glands increase in number, but they also develop in places where glands do not exist in health.

It is in the epithelium lining of these glands that the chief changes take place in cancer, the cells which constitute a single layer in health become stratified and increased considerably in number, often breaking down the whole lumen of the gland. The nuclei in the cells proliferate, and the cells become altered in shape, then become elongated, and assume an appearance of strings of cells dipping downwards into the deeper structures, and the epithelium itself becomes flattened, so as to have the appearance almost of squamous-celled epithelium. And it is only by tracing it to its origin that the true character can be ascertained.

The part at which cancer of the cervix commences is in the cervical glands. Dr. John Williams goes so far as to say he has never seen a case commencing in the epithelium

of the surface, but it may and undoubtedly does frequently commence in the glands close to the surface, and when these cases come under our notice they are so far advanced that it is most difficult to say where the disease commenced. The part of the canal which is usually attacked first is the lower half, although of course it may commence at any spot. The posterior lip appears to be attacked more frequently than the anterior, and it is of the utmost importance to remember that no matter in what manner the disease originates, it, I believe, invariably extends downwards and outwards at first, although it may grow in an upward direction later.

The symptoms of both these forms of disease are most obscure and more frequently than not, it is far advanced before advice is sought, and yet how many cases there are who consult their ordinary medical attendant for leucorrhœal discharge or perhaps slight hæmorrhage, and are provided with an astringent injection and a tonic, and are sent away being assured that their symptoms are entirely due to weakness, and the poor deluded woman continues to take her medicine and use the injection in the fond hope that all will come well presently. The discharge, however, continues; after a time weight and dull pain in the back are complained of with forcing bearing down pains. The bladder becomes irritable, and a constant uneasiness in the epigastric region is noticed, which is attributed to indigestion. Then usually the discharge is noticed to be tinged with blood, or there may be a sudden rush of blood or metrorrhagia. Even then often no examination is made and the patient is treated with steel and ergot, presently the discharge is noticed to be rather offensive, and the sense of forcing pain, weight and pains in the legs, more frequently the left than the right, and hæmorrhage after coitus draws more especial attention to the local condition, and at last a vaginal examination is made. And then it is that the grave nature of the disease is discovered. And only too often it is found to have extended to such a degree that the uterus is fixed, probably the vaginal walls invaded, and it is too late to do anything more than adopt palliative measures for the relief of pain and the keeping parts as clean as possible.

Such is the sad picture that is constantly brought before our notice both privately and at this hospital. Let me

again impress upon you therefore the paramount importance of early examination of these poor women when they consult you, suffering from symptoms of uterine mischief.

Now in cases of cancer of either of these two portions of the uterus, *i.e.*, the *portio vaginalis* or the cervix; if early examination is made the disease is readily recognised, or at any rate such a condition of things is found that would justify one in removing a small portion for microscopical examination when the nature of the disease will be at once ascertained—and in such a case by free removal of the parts by supra-vaginal amputation the disease may be thoroughly removed.

During the last five years I have performed supra-vaginal amputation for cancer of the cervix on over fifty cases of either cancer of the *portio vaginalis* or the cervix, with a death-rate of four per cent., and it will be instructive here to give you short histories of some of these cases selecting two typical cases of the disease as it attacks these parts separately. The cancerous nature of which were confirmed by microscopic examination.

*Case 1.*—Mrs. —, æt. at sixty-one, married; several children. Vagina free, the external os is ulcerated, the ulceration extending into the cervical canal. Bleeds freely on examination; much induration. On July 26, 1889, I performed supra-vaginal amputation of the cervix. The patient made an excellent recovery, and remained free from the disease until her death, which took place some two years afterwards from bronchitis. By the courtesy of Dr. McCaskie, whose patient she was, I was enabled to get the uterus, which contained not the slightest trace of disease.

*Case 2.*—Mrs. H., æt. at thirty-nine, four children. Always had rather hard labours. Has had leucorrhœal discharge since last child, two years ago. The discharge has always been yellowish, and latterly with occasional streaks of blood. Has had constant wearying bearing down pains. Menstrual flow quite regular. No extra pain at these times. No pain on coitus, latterly, however, has noticed slight bleeding afterwards, but took little notice of it until about three months ago when she consulted her medical man. No examination was made, and she was ordered an astringent injection which at first appeared to give her relief. She continued this until coming to consult

me, her reason for doing so being that after coitus she had rather a sharp attack of haemorrhage. On vaginal examination the posterior lip is found to be thickened and rough, deep ulceration extending into cervix. Bleeds readily on touch. Vagina free. Uterus movable. Supravaginal amputation was performed on December 2, 1889. There was some free haemorrhage which was arrested by plugging. Wound healed well and the patient has no recurrence at present time, over five years after operation.

These are two typical cases of many that have presented themselves, and illustrate well what I have said.

#### CANCER OF THE BODY.

We will now pass on to the important consideration of cancer of the body of the uterus, and this is the more important, as often even with the most careful examination the disease may be overlooked.

Happily the disease attacks this part of the uterus much less frequently than the vaginal portion or cervix, and at one time it was even questioned if the body ever was attacked primarily. Now my experience leads me to think that the body is much more frequently the seat of the disease than is generally supposed.

I have operated on six cases for cancer of the body of the uterus, and now present for your inspection the specimens I have removed. Perhaps the most typical case is that of Emily C—, æt. sixty-two, single. Admitted into the Cancer Hospital February 10th, 1894, suffering from cancer of the fundus. *Family history*: Mother died of cancer of the liver. The patient has had a discharge for some twelve months. About six months ago it became very offensive, and occasionally tinged with blood. She complained of pain at the lower part of abdomen and back; had lost flesh considerably, although she never was very stout. On November 27th, 1893, she went into the Samaritan Hospital, when the cervical canal was dilated, and the uterus explored; some soft growth was scraped away for microscopical examination.

On admission she was seen to be a very emaciated-looking woman. On vaginal examination it was found that she was suffering from a badly smelling discharge; the vagina was very small. The cervix feels healthy, and the uterus is found to be freely movable, and not appreciably enlarged.

Examination causes much pain. A foul discharge is seen to be exuding through the os. I performed vaginal hysterectomy upon this patient on February 20th, and she has made a very good recovery, leaving the Hospital five weeks after operation.

Another case, Frances St. J——, was very instructive, as showing the presence of the disease quite in its early state and complication with fibroids. She was aged forty-four years; married; four children. Admitted into the Hospital on January 4th, 1894. The patient merely complained of great pain in lower part of abdomen. Very slight, rather faintly smelling, discharge. By vaginal examination the cervix feels hard, and os thickened and eroded. Body of uterus enlarged; some bosses felt on posterior surface of uterus. Sound passes  $3\frac{1}{2}$  inches. Vaginal hysterectomy was performed on January 9th. The patient made an excellent recovery, and was discharged three weeks after operation.

On opening the uterus there were evidences of early carcinoma. Mr. Plimmer, pathologist to the Hospital, has made careful microscopic examination of this, and pronounced it to be early adenoid carcinoma.

Here then was a case that was seen quite in its early stage, and cancer was suspected, hence the operation of hysterectomy was performed and the diagnosis confirmed, and the operation justified by the microscope.

The disease usually attacks the body of the uterus after the menopause; in fact, I have not met with one case occurring before this period. Mr. John Williams' experience tallies with mine in this respect. Ruge and Veit have reported two cases as occurring under the age of forty: one was between forty and fifty; six were between fifty and sixty, and seven were between sixty and seventy. Dr. John Williams reports three cases: one fifty-three years of age, one fifty-four, and one sixty-nine. My cases were one forty-three, one forty-four, one fifty-two, one fifty-five, one sixty-two, and one sixty-three. In all these cases I removed the uterus, and all made good recoveries. So that it is important to remember that cancer of the body of the uterus is rare before the menopause.

The first symptom that usually draws attention to the disease is haemorrhage; women after the menopause notice bleeding, at first slight or in gushes, or only tinging the

discharge which probably they have had, but attributed to "whites" for some considerable period. They often take no notice of it, thinking that it is "nature" shewing itself again; some women are rather pleased at it, supposing themselves to be becoming young again. Always take it as a most serious symptom, therefore, if a woman consult you after the menopause suffering from haemorrhage: always insist on a vaginal examination, and do not be deluded because you find the os and cervix normal, but thoroughly examine bi-manually, and if there is much pain in the examination do not hesitate to make a thorough examination under an anæsthetic, as it is only by such an examination that you can hope to make a correct diagnosis and at the same time ascertain if the case is one in which an operation for total extirpation is justifiable. Another symptom is pain, often a forcing bearing-down pain, lasting sometimes for a considerable time, at others for a shorter period. The jolting of a cab or omnibus often increases this pain which is due, I suspect, to the contraction of the uterus endeavouring to expel the growth.

In all cases of doubt it is well, when the patient is under an anæsthetic, to dilate the cervix and remove with a currette a portion of the contents of the uterus, for it must not be forgotten that haemorrhage, pain, and offensive discharge from the uterus, may be occasioned by endometritis of old age, and is also present in certain forms of ulceration of the cavity which is looked upon as lupus.

As to the origin of cancer of the body it is, no doubt, often associated with fibroids. In the case I have just mentioned to you, there were a number of fibroids present. Ruge and Veit think the disease occasionally commences in polypi of the uterus. Dr. John Williams has recorded such a case in which a mucous polypi was removed from the cervix while undergoing the process of becoming a cancer. Or the disease may develop from the first in the form of a polypi. In the case I saw with Dr. Gross, the patient, æt. 62, had bleeding and discharge, and it was, on examination, concluded she had cancer of the body of the uterus. On examination under an anæsthetic I found the uterus full of a pulpy mass which readily broke down under the finger and had all the appearance of blood clot, this being removed I came down upon two what seemed to be distinct polypi, these I removed. The patient rapidly

convalesced. I had these growths examined microscopically and they were pronounced to be small round-celled sarcoma.

This patient had a rapid recurrence and a few months after I removed the uterus and appendages per vaginam. The patient again convalesced quickly, but the disease recurred in the broad ligament in a few months and the patient died.

Cancer, when originating in this manner, is usually circumscribed and will be found on section of the organ to be attached to some part of the uterine cavity by its pedicle the growth itself fungating from this and filling the cavity.

The disease, however, is often diffuse, in which case it nearly always commences on the glands or, it may be, in the epithelium lining the cavity. The uterus is usually enlarged and elongated. As the disease extends the walls of the uterus become involved and the muscular coat becomes thinner and thinner, and then the uterine peritoneum becomes adherent to the viscera, and it is no uncommon thing for a loop of intestine to be adherent. The disease, as it extends, does not invade the cervix until quite late, but it would appear to extend to the broad ligament, and often to the bladder and rectum, the organ becoming completely fixed. In a case I had recently under my care such was the case: the disease extended to the bladder first preventing the power of expulsion of the urine, the patient was obliged to have her urine constantly drawn. It then apparently caused blockage of one ureter with consequent hypertrophy of the opposite kidney. After a few months the disease extended and evidently blocked the mouth of the remaining ureter, with the result of uræmia, coma, and death.

#### TREATMENT.

We will now pass on to the treatment of the disease as it is found attacking the different parts of the organ, and here the advantage of dividing the organ into sections is most manifest as it is obvious the treatment of cancer of the portio vaginalis, the cervix and body being free, must differ essentially from treatment of the disease when the body alone is attacked.

The treatment of cancer of the uterus is a subject which has occupied the attention of both physicians and surgeons

from time immemorial, and although many suggestions have been made, no permanent benefit has been obtained, and these poor suffering women who were the victims of this terrible disease perished unrelieved.

I have examined the uteri of a large number of cases, who have died in the hospital, with a view of ascertaining the cause of death, and found that a large number died from uræmic poisoning, caused by obstruction to the ureters, by growth or pressure of the disease, others died from secondary growths, and some died from septic mischief and exhaustion. I was much struck, however, by the limited extent of the disease in the body of the uterus. In many cases, which from clinical examination, it was supposed the whole organ was affected, it was found that the disease was limited to the external os and cervix, but it had extended into the cellular tissue around the cervix, implicating the ureters, or had implicated the vaginal wall, in many advanced cases invading the bladder in front or the rectum behind.

Acting upon the information thus obtained, I came to the conclusion that for practical purposes it would be well to divide the disease into four divisions:—

1. Those cases in which the disease is limited to the portio vaginalis.
2. Those cases in which the cervix and body of uterus is implicated. The organ being readily drawn down to the vulva.
3. Those cases in which the disease has extended beyond the uterine substance into the surrounding cellular tissue, causing the viscera to be more or less fixed, and perhaps the roof of the vagina slightly involved.
4. Those cases in which the disease extends beyond the above limits, invading the vagina, and possibly the bladder or rectum, or indeed both of these organs.

The rational manner of treating cancer of the uterus must be based upon the same lines as treating the disease when attacking any other organ of body. If a patient consults one suffering from cancer of the breast, tongue or elsewhere, free extirpation of the disease is advised.

The same rule must hold good then in the advice you give for the treatment of cancer of the uterus. Free removal.

Of course, if on examination the parts are fixed, the vaginal wall implicated and the disease has infiltrated into the cellular tissues around the cervix, then the removal by extirpation becomes inadvisable if not impossible, in the same manner as cancer of the breast, where the mammary gland is fixed to the chest wall and the axillary and cervical glands invaded, the question arises can anything be done in these cases, and here I should be guided entirely by the extent of the disease. If the bladder and rectum appear to be free from infection, I think a great deal may be done by the judicious application of caustics or the galvano-cautery.

If, however, these viscera are affected or the whole parts are so absolutely fixed as to render the application of these caustics to be fraught with great uncertainty, then there is nothing to be done but to keep the parts as clean as possible by injection with some antiseptic fluid. I prefer sanitas fluid, the keeping the bowels quietly opened and the free administration of opiates by the mouth, or hypodermically if the pain is very excessive, or in the form of suppositories.

The method of syringing the vagina is a matter of great importance. I do not consider the placing the patient on a bed pan and using the vaginal tube sufficient, as there is always a lot of débris, and sloughs which this will not remove. But I consider the syringing, at least once or twice a day, should be done through a Fergusson's speculum and then with pieces of cotton wool on uterine forceps, the cavity should be wiped thoroughly out, by this means a large amount of badly smelling débris will be dislodged. Then the cavity should be thoroughly dusted with iodoform or a tampon of wool soaked in equal parts of *pinus canadensis* and glycerine, or smeared over with an ointment composed of

Sanitas oil .....	3 i.
Zinc chlorid. ....	gr. x.
Vaseline .....	3 i.

should be introduced into the cavity.

This should be removed night and morning ; the vagina being doused on each occasion, and the cavity wiped out with cotton-wool before the introduction of a fresh tampon. By adopting this simple plan of treatment the sloughs become dislodged, and a clean ulcerated surface disclosed.

In most of these cases benefit will be derived by the application of a strong solution of chromic acid (3 ii.—3 i.) to all the diseased surface after the parts have been thoroughly dried, being careful not to allow the solution to run on to the healthy tissues; these can be protected by the application of pieces of cotton wool soaked in a saturated solution of carbonate of soda, and finally some tampons should be placed in the vagina and left until the next day.

All offensive smell disappears, and the pain and bladder irritation are relieved.

The disease will be considerably retarded in its growth, and the patient's appetite will return, and the general health improve, owing doubtless to the non-absorption of the poisonous discharge.

Perfect rest should be insisted on, and the general health attended to by the administration of appropriate tonics, attention to the bowels, and if pain is present and prevents sleep, small doses of morphia may be advantageously given.

Many extreme cases treated in this manner have expressed themselves as greatly relieved, and have left the hospital much improved in general health.

The question next arises, Can nothing be done for this terrible disease by the means of drugs? Numerous drugs have been credited with ameliorating the suffering of patients, retarding the disease, and, indeed, in some cases of curing it. I need not go through the whole category of these remedies; it would be weariness and certainly not profitable.

The drug that hitherto has been credited with giving the best results is chian turpentine, as suggested by Dr. Clay. This drug, like all others, has been the source of much disappointment, but still in many cases if it has not arrested the disease, it certainly appears to have the power of relieving pain. Dr. Clay has reported several cases in which he claims that cure has been effected.

The emulsion, as suggested by Dr. Clay, is very nauseous, and the turpentine has been made in the form of pills, but if these are not freshly made they become so hard that I think they merely pass through the intestinal canal unaltered.

Pyoktanin is another remedy which has been credited with the property of curing cancer; its supposed power seems to be based upon the manner in which it attacks the cells when used for staining microscopic specimens. It is ordered to be injected into the cancerous mass, and also to be taken internally.

M. Narm (Bucharest) read a paper on the treatment of malignant tumours of the mouth, parotid gland, cheek, and of the uterus by injection of a solution of violet of methyl (1-100). Each day he injected from half a drachm to three drachms of the liquid into the morbid tissue. Out of 25 cases treated ten were claimed to be cured, while the remainder were much benefited. The liquid, while destroying the morbid elements, did not have any effect on the healthy parts, differing thus from caustics, which act on sound and diseased tissue alike.

I have used this in some cases, and in one or two small cases of sarcoma it certainly appeared to have a good effect in one case in particular, a small recurrent sarcoma in the cheek. The disease totally disappeared, and did not return for over a year, when it recurred and was again injected, and has not returned since some two years ago. For uterine cancer I have packed the cavity in some cases with gauze soaked in solution of pyoktanin, but it did not appear to do much if any good, and it played such havoc with the linen that I abandoned it.

I have of late, however, been employing some tabloids which have been made for me, consisting of a mixture of chian turpentine, ichthyol and pyoktanin. I have treated several cases with these tabloids, and I must confess with much benefit, and I am looking forward with great interest, hope and expectation that these tabloids if they do not cure these cases, at any rate will greatly relieve them. Time will show.

In cases not quite so advanced as these I have just alluded to much good may be hoped for by placing the patient under an anæsthetic and freely applying a galvano or thermo-cautery.

If the disease is limited to the vaginal portion of the uterus it may be attacked by the galvano-cautery, passing the needles into different parts of the disease, tolerably close together, over and over again. The action of the galvano-cautery, as thus applied, it must be remembered, is by

direct cautery action, and not by the destruction of the cells by the galvanic current.

I adopted this method of applying the cautery in the first instance, in the hopes that the cells might be destroyed by galvanic action without causing necrosis of the tissues by the cautery action but was disappointed. This form of application has, however, I think this advantage, that the needles can be inserted to an ascertainable depth into the diseased parts and the cautery action extends to a very limited extent beyond that. This form of treatment may be adopted in certain forms of cancer of the os or cervix by introducing one electrode into the cervical canal and then inserting the needle of the other electrode into the diseased tissues around the cervix. The cautery action is again exemplified hereby, in some cases, the os and cervix sloughing out in the course of a few days.

Paquelin's cautery, I think, is a better form of application for such cases if the cautery is to be adopted at all. The patient being placed under an anæsthetic is put in a lithotomy position by means of Clover's crutch and the diseased parts thoroughly scraped with a sharp spoon, or curette, then the cautery is applied at a white heat. This application may have to be applied several times and is not very satisfactory.

In all cases I would suggest a long course of treatment by the administration of the tabloids I have already referred to, as it is quite possible, if the system can be generally affected by the drugs, it may be the means of destroying any outlying cells which may have been left.

The best form of treatment, undoubtedly, in all cases in which the disease is limited to the portio-vaginalis, is, to perform amputation of the affected parts by cutting through the vaginal mucous membrane around the os, well free of the disease, and separating the cervix from the surrounding cellular tissues and amputating through the cervix.

Should the cervical canal be slightly implicated, the amputation can be carried higher by removing a cone-shaped piece from the uterus above the internal os.

Should the cervix be infiltrated with the disease then nothing short of vaginal hysterectomy or removing the entire organ should be sanctioned.

The mortality of this operation in experienced hands is not nearly so great as was supposed, and I believe with

care that the mortality may be reduced to about 5 to 8 per cent. In twenty-seven cases of complete removal of the uterus *per vaginam* which I have performed, I have only lost two cases from the operation. When it is remembered we are dealing with a disease which is sure to end fatally if left alone, and not only so, but the death is usually associated with the most terrible suffering, I say this mortality is not worth consideration. The important question to be considered is, undoubtedly, how many of these poor creatures are cured, and how many have recurrence of the disease and at what periods? These are questions which I propose to discuss in my next lecture together with the details of the performance of these operations.

---

## LECTURE II.

THE TREATMENT OF UTERINE CANCER BY OPERATION OR  
OTHERWISE, WITH SPECIAL REFERENCE TO VAGINAL  
HYSTERECTOMY.

In my last lecture I narrated to you the history and symptoms of cancer of the uterus as it attacks different parts of the organ. I further discussed the palliative treatment of those cases in which the disease invades the vagina and surrounding cellular tissues, the uterus being quite fixed, so that any attempt at a radical operation must be of necessity impracticable.

To-day I propose (1st) to narrate to you the form of treatment which has been fairly successful in my hands of those cases in which the disease has extended beyond the uterine substance into the cellular tissues around the cervix, thus causing the viscus to be more or less fixed, and perhaps the roof of the vagina slightly involved.

I have tried numerous forms of treatment in these cases that have been suggested and practised by different surgeons, but one after the other I have ceased to adopt them, as in none did any good result, and in many the disease seemed to be stimulated to increase with greater rapidity than if left alone.

It was with feelings of despair that I entered my uterine ward, feeling that all I could do was to alleviate the sufferings of some of the poor women who occupied the beds, but as to any further aid I felt I was utterly powerless to assist them.

Of late, however, a new era seems to have opened up, and I now undertake the treatment of many of these cases with full hope and expectation of, in some instances, eradicating the disease, and in others of considerably retarding it, and in all, of giving immense relief from pain and an improvement in general health.

In adopting the treatment I am about to describe, I was in the first instance struck by the fact that in many of the most advanced cases of uterine cancer which died, the body

of the uterus was often apparently free from disease. The disease appeared to have commenced in the cervical canal and then extended downward to the external os, and then eaten its way through the cervix and extended laterally into the cellular tissues surrounding it, and from thence along the broad ligaments.

Now, if the disease were attacked before it extended along the broad ligaments, and before the bladder or rectum was affected, I thought I saw my way to cope with it. In the first place the thorough curetting away of all the soft diseased tissues was imperative. Then to find some form of caustic, and method of applying it to the cavity caused by the removal of the disease, so as to burn deeply into the surrounding tissues into which the disease might have invaded.

With respect to the curetting, I found the curettes by themselves were ill-adapted to the purpose, as they removed the diseased tissues unevenly. I next turned my attention to Bell's dredgers, but found these did not fulfil all I wished, as they were too pliable and their calibre was too small. The idea then occurred to me if I could have an instrument constructed somewhat after the principle of Bell's dredger, that I could increase the size of by means of a screw in the handle, and furnished with watch-spring knives so shaped as to enable me to scrape out the contents of the uterus by simple rotations, I should have made a considerable advance, and should be able to accomplish all I required. Such an instrument was made for me by Messrs. Maw, Son, and Thompson, and, as you will see, is worked by means of the screw at the end of the handle. By means of this screw the blades, which when first introduced lie flat on the central rod, are made gradually to expand until they represent an area of about one and a half inches in diameter. Here, then, I was furnished with an instrument by means of which I was enabled to remove the whole contents of the uterus with comparative ease, and, as the blades are not too sharp, no mischief can be done with them, and very little bleeding follows its use.

The next question which arose was the form of caustic and the method of its application. And here I followed in the steps of Drs. Marion Sims and Heywood Smith. I

adopted the use of absorbent wool soaked in a saturated solution of chloride of zinc and then dried. The caustic applied in this form had the advantage of being readily packed. Before packing the uterus all bleeding must be arrested, as it is essential that the raw surfaces should be fairly dry before applying the caustic. The best method of arresting the haemorrhage is to apply locally sponges wrung out in very hot water, or, failing this, apply a sponge which has been soaked in tincture of matico. When the oozing has been sufficiently arrested, the chloride of zinc wool is packed in small pieces, firmly, so as to completely fill the cavity. The preparation of this wool is difficult, and of late I have been in the habit of using the chloride of zinc paste freshly made, and then applying a ring pessary with thin rubber diaphragm over the opening, so as to ensure the full action of the caustic to the vaginal border. A dry wool tampon is next applied to the opening in the vagina, and lastly the vagina is packed with tampons soaked in a strong solution of carbonate of soda. These tampons can be removed the day following the operation, but the chloride of zinc packing must not be removed for at least three days. This wool is most conveniently removed by Marion Sims's screw, which is a long straight rod with a very fine double screw at the top. After the removal of the plugs the vagina and uterus must be kept constantly syringed out with some antiseptic solution, preferably either solution of iodine or carbolic acid, through a full-sized Fergusson's speculum.

As a rule, the slough caused by the caustic comes away in about ten days or a fortnight, when a healthy granulating surface is left. Should there be any suspicious spot, it will be well to pack the cavity again. This can be readily done without an anaesthetic through a full-sized Fergusson's speculum.

Should any nodule be seen projecting it can be readily destroyed by injecting a few drops of solution of chromic acid (3 ii - 3 i) into it, this causes the nodule to shrivel up and come away in a few days.

In a case recently under my care, after the slough had detached itself, a large boss was seen growing rapidly from the posterior wall of the vagina, this I injected with five

drops of chromic acid solution and it dried up and became detached in about five days.

The following two out of a number of cases, all of which were markedly benefited by the treatment, will illustrate the usefulness of this method.

*Case 1.*—Mrs. S\_\_\_\_\_, aged seventy, consulted me on Feb. 3rd, 1892, suffering from carcinoma of the cervix uteri.

I performed supra-vaginal amputation of the os and cervix. The patient made an excellent recovery. In November of the same year, there being some bleeding from the uterus, I examined her and found recurrence of the disease extending into the uterine cavity. The patient suffered much pain and discomfort. Considering the age of the patient, I did not think the removal of the entire uterus justifiable. Moreover, the uterus was somewhat fixed by the extension of the disease. I therefore, with the assistance of Dr. Heywood Smith, thoroughly scraped and dredged the uterine cavity, and then packed with chloride of zinc wool, as above described. At the end of a fortnight I removed a thick slough, which represented a cast of the inside of the organ. The uterus and vagina were kept constantly syringed out three times a day with a solution of carbolic acid. The patient made an excellent recovery, and had no local return of the disease. She, however, died in May, 1893, from secondary growths in the liver and lungs.

The following case, for the notes of which I am indebted to Mr. West, my house surgeon, have been treated in the Cancer Hospital during the last year.

*Case 2.*—Rebecca H\_\_\_\_\_, aged thirty-three, married, six children, one miscarriage, admitted into Burdett-Coutts Ward, on January 4th, 1893, complaining of pain in the back and left iliac region, and of discharge from vagina, which patient has noticed for the last ten months.

Menstruation has been irregular during that period, severe floodings alternating with amenorrhœa; has lost much flesh.

*Present condition.*—There is a mushroom-shaped soft growth in the situation of the vaginal portion of the cervix which has ulcerated. The growth extends on to the posterior vaginal wall. The uterus is somewhat fixed

On January 24th, 1893, under ether, all the soft parts of the growth was scraped away with the dredger, and the whole of the interior of the uterus was also scraped, which left a crater-like cavity. The cavity was then plugged with dry wool, which had previously been soaked in a saturated solution of zinc chloride and allowed to dry. A dry tampon of wool with a string tied to it was then passed and the vagina filled with plugs squeezed out of a strong solution of bicarbonate of soda.

The patient had very little pain after the application of the caustic.

*January 25th* : All the vaginal tampons removed except one and the vagina well douched out three times a day.

*January 27th*—The zinc chloride wool removed from the uterine cavity. The uterus well douched out through a Fergusson's speculum.

*January 28th* : Much offensive discharge: otherwise patient experiences little discomfort. Temperature 99.8° F. Vagina well syringed out through a Fergusson's speculum three times a day with 1 to 40 carbolic.

*January 30th* : A whitish slough came away from the vagina, being a cast of the ulcerated cavity.

*February 1st* : Patient much better; no discharge to speak of; and states she suffers no pain. On vaginal examination the cavity feels soft and healthy.

*February 13th* : Patient discharged; feels much better in general health; no pain or discharge to speak of.

*August 2nd* : She has reported herself from time to time and still keeps in good health.

There is a firm cicatrix at seat of cauterization. No discharge.

This patient is still attending at the out-patient department and there is no recurrence of the disease *in situ*.

The treatment of such cases as these is naturally attended with much anxiety, and, indeed, uncertainty. The caustic must be most carefully applied on account of the many important parts that are in close proximity: the bladder, the rectum, and the ureters. In two of my cases the slough extended into the rectum, causing a recto-vaginal fistula.

It is very extraordinary how little pain these patients suffer from the application of the caustic, and the day following operation patients who have suffered much before the application express themselves as free from pain.

I will next discuss the treatment of those cases in which the disease is limited to the portio vaginalis or cervix, the body being free the vaginal walls not implicated and the uterus freely movable. In these cases the operation of supra-vaginal amputation gives excellent results.

#### SUPRA-VAGINAL AMPUTATION.

In December, 1892, I read a paper at the British Gynaecological Society giving details of twenty-five cases of supra vaginal amputation of the cervix for uterine cancer. Of these fifteen recovered and have presented themselves for examination from time to time since. All these are still well and free from any recurrence, the time which has elapsed since the operation on these cases varies from three to eight years. One case remained free from the disease for two years when recurrence occurred. In five cases recurrence took place within one year. Two cases were lost sight of but were free from recurrence when last seen; and two died, one from pelvic cellulitis and the other from the extent of the disease. This last case should not strictly be included in the series as the disease was far too extensive to allow of simple supra-vaginal amputation.

Seven cases out of the twenty-five which either died or had early recurrence were clearly not benefited by the operations, or in other words they were unsuitable for this special form of operation. Six of these seven cases, from my later experience might, I think, have been benefited had vaginal hysterectomy been performed.

Since reporting these cases I have operated in a similar manner upon thirty-three others with the same percentage of deaths, viz. : 4 per cent.

Now, before proceeding further, it will be well to define the meaning of the term supra-vaginal amputation : It must be thoroughly understood that it is not merely the amputation through the cervix for the removal of the external os and lower part of the cervix, but for the removal of the entire cervix, with, in most cases, a large cone shaped piece

out of the body of the uterus. I am quite in accord with John Williams, Schroeder, and Hofmeir, whose statistics go conclusively, I think, to show that when carcinoma of the uterus is seen early, and the disease is limited to the vaginal portion of the organ, supra-vaginal amputation is all that is necessary, and it is useless to run the extra risk of total extirpation. Gusserow gives the mortality after supra-vaginal amputation when performed by the knife as 9·09 per cent.

#### METHOD OF PERFORMING THE OPERATION.

The patient being placed in the lithotomy position, the legs supported by a Clover's crutch, the vagina is first thoroughly douched out with carbolic solution (1-40) and perfectly cleansed by means of stick sponges. Two Sim's specula are now introduced, and the edges of the diseased os seized by two or more pair of Vulsella forceps, by means of which the diseased cervix is drawn well down through the vulva. A sound is next passed into the bladder to define its relation to the cervix. The mucous membrane is to be divided as far away from the disease as possible, usually, I think, a line just where the mucous membrane of the vaginal wall ceases, and it becomes reflected over the neck of the uterus is the best, the scissors, which, by the by, I always use, should be long and strong and bent on the flat, the points, after the mucous membrane is divided, should be kept just in the muscular tissues of the uterus as near to the outer border as possible, and the scissors carried by a succession of short snips evenly round and round the part to be excised. In this way there is no difficulty in arriving at the internal os, here is the crucial point, and if it is found necessary to go beyond this great care will have to be exercised, as the point of the scissors may readily cut through into the peritoneum. Some surgeons lay great stress on this danger, but as a matter of fact in performing supra-vaginal amputation, Douglas's pouch is much more frequently opened than not. Some surgeons suggest that this should be stitched up. I never adopt this practice, and have hitherto seen no bad result follow. Strong traction should be used upon the os with Vulsellum forceps, and it is often well to introduce a sound into the uterus to serve as a guide. Any bleeding points should be caught and tied. If, however, as is occasionally the case, the haemorrhage is

profuse, the uterine arteries must be secured ; this is rarely necessary. In some cases in which the haemorrhage proceeds from points situated in the uterine wall it will be found most difficult to ligature the vessels ; in such cases one or two or three plans may be adopted, one is to leave the forceps hanging for a period of twenty-four hours, the other to pack the wound with gauze soaked in a tincture of matico, or to apply Paquelin cautery freely.

In cases of women who have not arrived at the climacteric period, and in which the operation has not extended beyond the internal os, the endometrium not being entirely removed, it is always wise to introduce a vulcanite stem into the uterine cavity, and to have this removed and replaced each day, thus preventing the wound on healing from closing the outlet of the uterus, as in many cases might take place. By not attending to this precaution I have seen, in several instances, very great discomfort, and, indeed, risk to life.

After the operation is completed, and all bleeding arrested, I am in the habit of passing a stout long chromic gut suture through the anterior and posterior lips of the opening made into the uterus. This has been, on more than one occasion, the source of great help in those cases in which secondary haemorrhage has set in. In such, if this precaution is not taken, it is often most difficult to get at the stump to examine from whence the bleeding proceeds, as in all these cases the fundus and stump of the uterus recede considerably, and it is a great comfort to be able to examine it merely by means of traction of the sutures which pass through the stump, instead of having to grope about through a speculum with Vulsellum forceps.

In the after-treatment I consider that the parts should be thoroughly syringed out night and morning through a *full-sized Fergusson speculum*. Simple irrigation without the speculum is not sufficient, as often clots may be collected above the opening in the roof of the vagina, and without these are thoroughly removed and the parts cleansed, septic mischief is very likely to follow.

A few words as to the class of cases in which supra-vaginal amputation of the cervix is applicable, they may be summarised by saying that, in my opinion, if a case of carcinoma of the uterus, in which the disease is limited to the vaginal portion of the viscus, and the fundus to all appearance being

free, the uterus movable, and the vaginal walls not implicated, such a case is suitable for supra-vaginal amputation, and good results may be anticipated ; and by this operation I mean not only amputation through the neck of the uterus, but a good sized conical piece being removed from body of the viscus, extending, if necessary, to the fundus, and certainly well above the internal os.

Allow me here to say a few words as to the immediate risks of the high operation. They may be summed up as being limited to haemorrhage and sepsis. With respect to haemorrhage, I have seen cases in which very smart bleeding has occurred during the performance of the operation, this can usually be readily controlled by passing a ligature round the uterine arteries, or by the free application of the cautery. In some cases secondary haemorrhage has caused trouble, but in such the bleeding can invariably be arrested by plugging the vagina.

From the second danger, sepsis, I have lost one patient, from pelvic cellulitis, the result, no doubt, of sepsis. To avoid this, care must be taken to plug the cavity created by the removal of the diseased cervix with iodoform gauze, and not remove it for the space of three or four days, unless the temperature warns you to remove it earlier. The vagina should be kept constantly syringed out through a full-sized Fergusson's speculum twice or three times a day with some antiseptic solution.

In discussing the method of performing supra-vaginal amputation there are two or three plans advocated by different surgeons who practise this operation, some advocating the use of the galvano-cautery, while others prefer the knife or scissors.

Dr. Baker<sup>1</sup> reports that in two series of cases, in the first, covering a period of five years, ending 1882, he had twelve cases of cancer of the uterus by the high operation, and in the seven subsequent years he had operated on sixteen cases by the same operation. Of the first series, 50 per cent. remained well at the end of twelve years. In one case he had to re-open the cervix for the escape of retained menstrual blood. In the second series, operated on from 1882 to 1889, in all sixteen cases, he had no death from the

<sup>1</sup> *American Journal of Obstetrics*, vol. xxvi. p. 1224.

operation, and in ten cases no recurrence of the disease. One case was well at the end of seven years, three at the end of six years, three at the end of three years, and one at end of two years.

Fifty-three per cent. were well at the time of his reading the paper, the remainder had died of recurrent disease. These operations were done by the removal of the diseased tissue with scissors or the scalpel, the cautery being applied to the raw surface.

Dr. Reamy,<sup>2</sup> of Cincinnati, in reporting a number of cases, also strongly advises the use of scissors or scalpel. He was in the habit of closing the wound in the vagina with sutures and so obtaining primary union. In our own country, Dr. John Williams<sup>3</sup> and myself also strongly advocated the removing of a conical piece of the uterus with scissors beyond the cancerous tissue.

Dr. John Byrne<sup>4</sup> prefers the use of the galvano-cautery. He says "there are only two surgical measures worthy of mention to choose between at the present day, these are first the high amputation or excision as the case may be, by galvano-cautery, not only of all diseased parts, but as much more and beyond the supposed danger-line as can be safely taken away, the removal to be followed by a thorough *dry-roasting* of all exposed surfaces, or, secondly, vaginal hysterectomy with the more attractive surgical clamour and ghastly records of lives shortened and often sacrificed on the altar of what, now-a-days, is called progressive gynæcology."

Dr. Byrne's statistics are most brilliant. In nearly 400 cases he has not had a single death due to operation ! In forty out of sixty-three of cancer of the *portio vaginalis*, twenty-three having strayed away, periods of exemption from the disease are reported, ranging two to twenty-two years, being an average for each case over nine years. Of eighty-one cases, involving the entire cervix, thirty-one were lost sight of, ten relapsed within two years, five had no recurrence for two years, two for eleven years, one for thirteen years, and one for seventeen years ; so of the fifty cases of this class, whose histories could be followed up, there was an average period of exemption for each of nearly six years.

<sup>2</sup> Gynæcological Trans. Amer., vol. xiii.

<sup>3</sup> Harveian Lecture, *Lancet*, vol. i., 1887.

<sup>4</sup> *Brooklyn Med. Journal*, vol. vi. p. 741.

In this country, Dr. Lewers<sup>5</sup> reported, at the Royal Medical Chirurgical Society, the result of nineteen cases on which he had operated by scissors and the cautery with no deaths; six of these had been operated on over two years, and were reported as being free from recurrence.

Gusserow gives the mortality after supra-vaginal amputation at 9.07 per cent. when the knife is used, and 7.75 after galvano-cautery. This would appear from the above remarks to be far above what may be expected, and if suitable cases are selected I am sure the mortality will not exceed 4 per cent.

It will be seen then that supra-vaginal amputation for uterine cancer in suitable cases is an eminently satisfactory operation.

#### VAGINAL HYSTERECTOMY.

We will now proceed to consider the class of cases which are suitable for total extirpation.

Dr. Martin, of Berlin, says "I recommend the vaginal extirpation of the uterus as the operation, as the means which we ought to apply in cases of cancerous diseases of the uterus as long as the disease is limited to the organ itself."

Dr. Skeen, Brooklyn<sup>6</sup>, speaking of vaginal hysterectomy, says "the operation in my opinion is indicated when the disease is near to or after the menopause. When it begins in the endometrium, more especially in the body of the uterus. . . . When the diagnosis being made and the vaginal wall and fallopian tubes are not involved, and before necrosis has began in any part of the abnormal tissue."

Now with regard to the immediate recovery, it has been well pointed out by Dr. W. A. Duncan there would be great risk in accepting statistics, of getting the mortality inherent to the operators and not the operation, and I think the rule laid down by Mr. Lawson Tait seems reasonable; it consists in only dealing with results obtained in the practice of those surgeons whose ability and experience are affirmed.

If the surgeon is at all doubtful as to the limits of the disease, *i.e.*, if the disease having commenced in the cervix

<sup>5</sup> Royal Med. Chir. Trans., vol. lxxvi. p. 101.

<sup>6</sup> Med. Record, New York, vol. iv. p. 29, 1891.

or external os, and he is uncertain as to how far it has extended into the body of the uterus. Total extirpation should be practised, for as the results of my cases show, and which is confirmed by Leopold, Kaltenbach, D. de Ott, Pean, Pozzi, Japp Sinclair, Lewers, and others, the immediate mortality in suitable cases from vaginal hysterectomy in experienced hands may be looked upon at from 5 to 8 per cent.

I think then we may adopt the rule: *That when the disease has extended beyond the cervical canal, or has commenced in the fundus of the uterus, and the uterus itself is freely movable and readily drawn down to the vulva, that such cases are suitable for operation. But if the disease has extended to the broad ligaments, or if the vaginal wall is seriously implicated, or if we can feel any enlargement of the lumbar or sacral glands and the uterus is fixed, then it will be wise to either leave matters alone or adopt some palliative measures, to which I have alluded.*

With regard to the question of recurrence after operation, it is difficult to lay down any rule, as it is impossible to estimate how far the lymphatics may be involved or the disease extended into the loose areolar tissues around the neck of the uterus. But we may be guided to a large extent by the nature of the malignant growths which exist, and for this purpose I think we might do much if we, as a preliminary measure, satisfied ourselves on this point by obtaining a small scraping and having it examined microscopically. I think it will be found that some of these rapidly growing medullary carcinomata or small round-celled sarcomata recur very much more quickly and certainly than adenoid carcinoma or epithelioma. With regard to the length of time patients live after the operation of supra-vaginal amputation of the cervix and total extirpation of the organs, there are no statistics to guide us, but judging from the statistics recorded by Hofmeier, which my own experience thoroughly agrees with, of the comparative length of time that patients remained free from recurrence after total extirpation and supra-vaginal amputation of the cervix it would appear that such is the case. From these statistics embracing entire operations and partial ones from the practice of Schröder, it will be seen that the percentage of cases in which patients were free from the disease at the end of one

year was in favour of total extirpation of the organ, yet each year after this the advantage gradually decreased, until at the end of the fourth year not one of the cases of total extirpation were free from recurrence, while 41.3 per cent. of those cases in which partial removal of the organ had been practised were well.

Now there appears to be two ways of explaining these statistics, one is that in those cases in which partial removal was practised, the disease was recognised and removed before the lymphatics became affected. The other explanation is that in the cases of partial removal, the disease was either epithelioma or adenoid carcinoma, while in many of those in which the whole organ was removed the disease was either sarcoma or medullary carcinoma.

I think it will be found that a large number of cases of malignant disease of the uterus are sarcomatous, much more so than is generally imagined. Of those which I have operated on two-thirds were pronounced by the pathologist to be suffering from sarcoma.

In one case of sarcoma the disease returned at once, and I shall watch with interest to see how long the other cases remain free from the disease. I consider this a very important point, and if it can be proved that these rapidly increasing growths do return quickly it is a question if the case so affected should be subjected to operative interference at all, or at any rate only when seen quite early. This point is one well worthy of study.

#### METHOD OF PERFORMING OPERATION.

The next question we have to discuss is, what is the best method of performing the operation?

The patient should have, for some days previously to operation, the vagina thoroughly douched out with either perchloride of mercury solution or strong carbolic acid solution 1-40. On the day previous to the operation a dose of castor oil or a good dose of salts in a tumblerful of hot water should be given early in the morning, and on the morning of operation a large enema should be administered.

Early on the morning of operation some good strong beef tea should be given and beef tea enema about four hours previously to the operation. And just before the patient is

placed on the table an enema of three ounces of beef tea and one of brandy should be administered.

The patient should be placed on the table in the lithotomy position being fixed by means of a Clover's crutch. The vagina is then to be well washed out with a strong solution of carbolic acid 1-40. A Sim's speculum introduced into the vagina and the edges of the diseased uterus seized with vulsellum forceps by means of which the uterus should be drawn well down towards the vulva.

A bladder sound must next be introduced into the bladder to define its relation to the cervix or uterus. This having been ascertained, the mucous membrane of the vagina is to be divided as far away from the diseased part as possible and the cellular tissues around the cervix be detached just as in the operation for supra-vaginal amputation.

The bladder being pushed well forward with the finger or blunt end of scissors ; the peritoneum will then be recognised in the front of the uterus, this must be divided freely. The next step is to open the peritoneum in Douglas's pouch. This being done, by placing the forefinger of the left hand into the peritoneal cavity in front and the thumb behind, it is easy to grasp the broad ligament. The uterus being now drawn well down and a few snicks made with the scissors on each side the uterine arteries will be readily recognised. I then pass my long needle smoothly up upon the uterus in front, then the point being felt just above the uterine arteries is depressed and forced through the broad ligament the point being brought into the vagina through the posterior opening in Douglas's pouch. This is threaded with No. 4 Chinese silk and withdrawn, the ligature is tied tightly about an eighth of an inch from the uterus. A pair of pressure forceps applied between the ligature and uterus and the parts divided with scissors. The same manœuvre is carried out on the other side. The uterus will now be found to be quite freely movable and it is an easy matter in those cases in which the uterus is not enlarged and the vagina is fairly large to either ante-vert or retro-vert the uterus. All the vulsellum forceps that have been on are to be removed. The uterus being turned over so as for the fundus to be in the vagina the ovaries and tubes are readily brought into view and the ovarian arteries ligatured and the broad ligament divided on each side.

The uterus then is removed and all bleeding being arrested the cavity of the abdomen is flushed out with sterilized water, or a weak solution of boric acid. The anterior and posterior flaps of the peritoneum are seized with forceps and drawn well down, a glass tube inserted and the vagina packed with iodoform gauze. Finally, a winged catheter is placed into the bladder, and a morphia and belladonna suppository into the rectum, and the patient returned to bed with hot water bottles around her. If all goes well the dressing should not be removed until the third or fourth day.

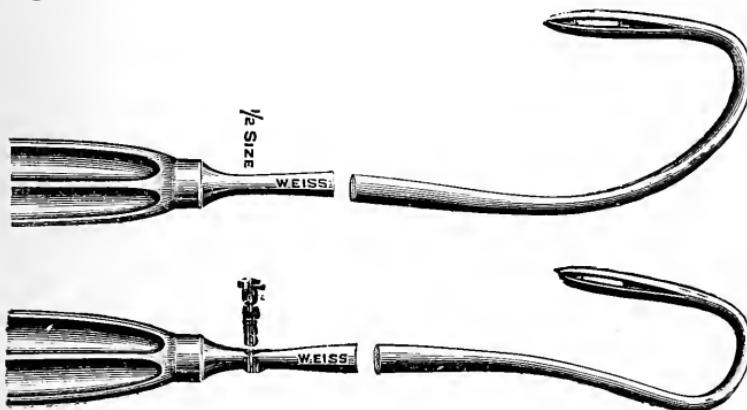
In those cases in which the uterus is very much enlarged it may be necessary, indeed, it is more easy, to perform the operation by, in the first place, freeing the cervix and ligaturing the uterus, *per vaginam*, and then opening the abdomen in the middle line and ligaturing and dividing the broad ligaments through the abdominal opening and removing the uterus through the opening.

In some cases of elderly unmarried women it will be necessary to divide the perineum to obtain room for manipulation. This, however, should never be done if it can be avoided, as there is always the risk of tearing into the rectum. In connection with the operation several important questions of detail arose.

First, should the haemorrhage be controlled with clamp and forceps, or should the surgeon only adopt the use of the ligature? In the *Archives Générales de Médecine*, G. Richellet ("Annals of Surgery," vol. xvii, part 9, p. 334) has furnished an article based upon his experience acquired in 225 operations of vaginal hysterectomy, in which he had eleven deaths. Operations, as the writer says, "were made under the most varied and dangerous conditions, having never declined to operate when there seemed a chance of recovery for the patient." This operator appears to use the clamp exclusively for arresting haemorrhage. Pean and others also adopt the use of the clamp. My own experience is that in all cases where a ligature can be applied it should be. It is all very well to say that the use of the clamp saves time, and acts as drainage, so they may, but, as I have shewn in another place, the results after the use of the clamp are not so good, and this can, I think, be explained by the fact that to the patients the retention of a large

number of forceps for thirty-six or forty-eight hours is painful, the risk of haemorrhage on their removal, although not great, at any rate exists ; and lastly the necrosed portion of tissues which have been compressed by the clamp remain in the wound after removal, and may act as a fruitful source of septicæmia. Moreover, with these forceps in the vagina the peritoneal wound is kept open, and the risk of intestinal adhesions or peritonitis is considerably increased. Further, one or both ureters might be compressed by the forceps, as has to be done on occasions by the most experienced surgeons. I have had some forceps made for me by Messrs. Weiss, which in certain cases of short, thick, broad ligaments can be readily, and I think advantageously, applied.

Now, there is a considerable difficulty in many cases in applying the ligature. To get over this I have had these needles made, which, you will observe, are fashioned in such a manner that there is a long arm from the bend in the needle to its point ; it is also furnished with a large eye so as readily to be threaded. These needles can be easily slipped over the uterus and made to pierce the broad ligament at the spot desired, the point being brought out into the vagina and threaded. By this means I find it very much easier to ligature the uterine arteries and lower part of the broad ligature than by any other needle I have seen. This being accomplished in those cases when the uterus is not large it can be readily either retro- or ante-verted, and the ovaries, arteries, and remainder of the broad ligament ligatured.



*Should the Ovaries and Tubes be removed?* In the majority of cases in women who have passed the climacteric I should certainly say no, but in younger women if the ovaries present into the wound I do not think the risk to the patient is increased by their removal. I have but little doubt, however, that they become atrophied in a very short while after the uterus is removed, and cause no trouble by being retained. Dr. W. Duncan has, however, reported a case in which there were three very sharp attacks of pain, that correspond exactly with the menstrual periods, showing indubitably ovulations with circumscribed peritonitis.

I have now a patient from whom I removed this large sarcomatous uterus who suffers periodically in the same way ; the mammae also becoming enlarged and painful and she also suffers from severe headaches at these times.

*Drainage.*—The question of drainage as in abdominal operation is one which has not been as yet settled. In the cases I have operated on I used drainage in some and not in others. In one case that died I am very strongly of opinion that I lost her because I did not drain. The rule that I have adopted is that in those cases in which the diseased uterus is removed without difficulty, I merely pack the vagina with idoform gauze, and do not introduce a drainage tube, but those in which there is much tearing or difficulty in getting the uterus out I consider should always be drained by the introduction of a glass drainage tube, which can be emptied every six hours, as may be necessary. I prefer a glass drainage to rubber tubes, for the reason that they do not collapse when the vagina is packed, and being firm any oozing is suppressed by means of the pressure that is exercised. The tube can be removed at the end of twenty-four or forty-eight hours if there is no sero-sanguineous fluid. A narrow slip of gauze should be introduced into the tube.

*The Treatment of the Peritoneal Flaps.*—The next point of importance, and this is one to which too much attention cannot be paid, is the treatment of the peritoneal flaps. It has been suggested and practised by some surgeons, especially on the Continent, to unite these flaps by a continuous suture ; others leave them alone. I have found by experience that the first of these two lines of practice is

unnecessary, and the other is fraught with great danger. Now, if you will examine the position and condition of these flaps after the uterus is removed, you will find that invariably the peritoneum is curled up and doubled upon itself thus, so that if they are left alone the whole raw surface has a tendency to drain into the peritoneal cavity, moreover, should there be any oozing into the peritoneum this very doubling up of the flaps would be apt to prevent its discharge through the vagina; there is great danger also of a knuckle of intestine becoming adherent to the wound, and trouble created by this. It is the want of attention to this detail that has led to disaster in many cases. To overcome this I invariably catch the edges of the flaps with long curved forceps, fixing two pairs of forceps on to each flap, I then draw these firmly down, keeping the ends of the forceps approximated, and then pack strips of iodoform gauze firmly on each side of the flaps, so as to cause the peritoneal surface to be brought into accurate opposition. By adopting this practice there is no necessity to unite the flaps by suturing. Should the drainage tube be inserted I pull the flap well down just the same.

*Flushing the Peritoneum.*—Before finally packing the vagina, it is of the greatest importance that the peritoneum should be thoroughly well flushed out with sterilised water, as often small clots of blood or débris are left in the cavity.

*Packing the Vagina.*—Finally the vagina is packed firmly with strips of iodoform gauze, iodoform being puffed into the canal as each strip is inserted. A winged soft rubber catheter should be inserted into the vagina, and the patient returned to bed.

The immediate mortality after total extirpation of the uterus by Continental surgeons is reported to have decreased to about 10·5 per cent. as a general average, while certain operators claim to have succeeded in reaching a death rate as low as 3 or 4 per cent. In comparing the comparative merits of such operations as supra-vaginal amputation of the cervix uteri for cancer and total extirpation of the uterus for the same disease, not only must the immediate mortality after the operation be taken into consideration, but also the state the patient is left in.

Now, in dealing with this operation we must compare only those cases in which the operation has been performed

for cancer, we must have no watering down of statistics by the addition of operations which have been done for minor ailments ; we must also of necessity confine our remarks to those cases in which the disease is limited to the vaginal portion of the uterus, as it is obvious if the body of the uterus is involved the high operation is not practicable, and the only operation that can be practised with any hope of relief must be that for total extirpation of the organ.

Now, for a few minutes, let us examine into the dangers which may follow total extirpation of the uterus ; they are by no means either few or trivial.

*Intestinal Obstruction* has been met with on several occasions after vaginal hysterectomy, the result of adhesion of a loop of intestine to the edges of the wound caused by the removal of the uterus. In the *American Journal of Obstetrics*, vol. xxiii., Dr. Coe has reported two cases which occurred in his own practice, and eight which he collected from other sources. In all of these laparotomy was performed for the relief of the obstruction with fatal results. The pathological conditions and clinical symptoms were almost identical in these cases ; in each case there was an adhesion of one or more coils of intestine to the edges of the vaginal wound, with distension and bending of the gut above the point of adhesion, thus obstructing the lumen. Although there was intense congestion of the serous coverings of the intestine, in neither instance was general peritonitis found at the operation. In all but one case death seemed to be due primarily to exhaustion, or in those cases in which laparotomy was performed, to the shock of the operation. The symptoms continued indefinite until the fourth day, and the classic symptoms of intestinal obstruction, especially faecal vomiting appeared when it was too late to profit by them.

A similar case occurred to me only the other day, a comparatively easy case for operation. The uterus which I have here was removed, there was very little haemorrhage, but the omentum came down into the vagina. This was pushed back. On the second day the patient had vomiting, but no tympanitis. The symptoms increased, and on the fifth day became urgent. I opened the abdomen, and found the omentum strongly adherent to the wound in the vagina, binding down a loop of intestine. I released this,

and the next day the bowels were opened freely, but the patient succumbed, and died of exhaustion.

Dr. Cullingworth, in giving the subsequent history of four cases of vaginal hysterectomy, says two enjoyed perfect health until within a few days of their death. In each of these cases death resulted from intestinal obstruction, the cause of which in one case remains unknown; in the other it was due to pelvic adhesions.

Professor Reichal,<sup>7</sup> in an article on ileus after vaginal hysterectomy reports three cases of intestinal obstruction.

Other cases have been reported by Drs. Bokelmaan,<sup>8</sup> Leopold,<sup>9</sup> and Lundau,<sup>10</sup> death resulting in each case. Later cases have been reported by Dr. Coe.<sup>11</sup> This accident of intestinal adhesion to the raw surfaces seems to be more frequent when forceps are used to control haemorrhage than when the ligature is used.

#### URETERS.

A second source of danger in this operation is met with chiefly in those cases in which the disease has extended somewhat laterally, from the risk of either dividing the ureter, or including them in the ligature or forceps applied to the broad ligament to arrest haemorrhage. Any surgeon who has performed vaginal hysterectomy frequently is well aware of this danger, and there are few who could not recall cases in which this accident has happened to them; there are several such cases recorded.

Vesico-vaginal or recto-vaginal fistula are by no means so rare as might be supposed after total extirpation of the uterus; there are several cases on record, and these could be, I think, considerably increased if all such accidents were reported. Vesico-vaginal fistulæ are especially liable to occur in those cases in which the disease is somewhat extensive and the pelvis contracted, necessitating a good deal of force to enucleate the uterus. This catastrophe does not sometimes declare itself for some days after the operation, but when the slough becomes detached the surgeon, to his horror, on visiting his patient finds urine

<sup>7</sup> "Zeitschrift für Geb. u. Gyn." Band xv., Heft 1.

<sup>8</sup> "Archives für Gyn." Band xxv., Heft 1.

<sup>9</sup> *Ibid.* Band xxx., Heft 3.

<sup>10</sup> *Berlin Klin Wochenschrift*, 1888, No. 10.

<sup>11</sup> *Am. Journal of Obstet.*, vol. xxxiii., p. 469.

trickling out of the vagina. Often the opening is so high up that it is difficult to locate the exact seat of the urinary fistula, and I need hardly point out that in these cases the hopes of closing the fistula must be very small.

Another source of danger is peritonitis, especially in those cases where the parts are of necessity much dragged and torn.

Sepsis again is answerable for many of the deaths. And lastly haemorrhage often is severe and alarming.

#### RESULTS.

In referring to the statistics of the result of total extirpation of the uterus, Dr. Paul F. Munde and Burke, in a most instructive paper reported in the *Annual of Universal Medical Science*, vol. II, 1891, have reported 492 cases in which the operation was performed by several different operators, the immediate mortality averaging 10.5 on all cases.

The comparison of the operation when performed by different methods is very instructive, thus the mortality when ligature alone was adopted is as low as 6.6 per cent., when the ligature and clamp were used it rose to 11.5 per cent., and when the clamp alone was the method employed for controlling the blood vessels the deaths still further increased to 16.6 per cent. This large difference in the death-rate seems to be accounted for by the cases in which the ligature alone was used being those in which the disease was limited, and the uterus readily drawn down out of the vulva. In such cases the high operation would probably have been efficacious. So that it would appear that the higher rates of mortality might have been accounted for more by the extent of the disease than by the method adopted of securing the vessels.

In a recent discussion<sup>12</sup> upon the relative merits of vaginal hysterectomy and supra-vaginal amputation for cancer of the uterus, which took place at the Obstetrical Society, opinions seemed to differ materially, but the weight of the argument appeared rather to tend in favour of the lesser operation. Dr. William Duncan, alluding to the mortality after total extirpation, referred to the series of cases reported by Professor Japp Sinclair, and observed

<sup>12</sup> *Lancet*, 1893, vol. I, p. 7.

that his mortality was certainly as small as that of supra-vaginal amputation.

Drs. Terrier and Hartman<sup>13</sup> give details of a series of thirty-four vaginal hysterectomies with eight deaths. One from haemorrhage on the seventh day, two died from shock and hemorrhage in forty-eight hours, two died from shock on the third day, two succumbed to peritonitis. In one case a pair of forceps had pinched a loop of intestine, causing perforation, and in one case the uterus was very adherent, and in the last case death resulted from phlebitis fourteen days after operation. In considering the ultimate results these physicians report two cases as well without any recurrence after six years, four months; one after four and a half years; in the others relapse occurred, in eight cases, at periods between one month and two years; one in two and a half years; and three are free from disease at time of report, at periods from eight months to three years after operation. Three cases were incomplete, in one necessitating the opening of the cul-de-sac and bladder, and two have suspicious nodules at the side of the vagina.

The conclusions arrived at are that relapse is frequent, about 70 per cent., and often rapid, but may not manifest itself by signs noticeable to the patient until a considerable time; 30 per cent. of those who survive seem to be completely cured.

Post (the *American Journal of Obstetrics*, November, 1887), in 700 cases of vaginal hysterectomy he has collected, asserts that the mortality after the operation is 24 per cent. Dr. Florian Krug,<sup>14</sup> New York, gives us his personal experience with vaginal hysterectomy. He is strongly in favour of total extirpation in suitable cases, and reports fifteen on whom he had performed the operation during three years. Two of these were done for non-malignant disease of the uterus, and one for a doubtful case of malignancy, thus reducing the number to twelve cases. One of these died from the operation, and one had recurrence in five months after the operation. All the others are reported as having had no recurrence and being in perfect health. Nine of these cases had, however, only

<sup>13</sup> *Revue de Chirurgie*, April, 1892.

<sup>14</sup> *American Journal of Obstetrics*, vol. xxiv, p. 796.

been operated on from three to sixteen months before the reading of the paper: too short a time to give any reliable information as to the recurrence.

From the few cases in which Dr. Krug has operated it is evident, as he points out, that he only operates on those cases in which he is quite sure he can remove the whole of the diseased tissue; he says wherever the removal of all diseased tissue is impossible, vaginal hysterectomy is not indicated; and if recurrence takes place soon after it has been performed, it only goes to show that cancerous foci have been left behind. He then goes on to describe his method of operating which is based upon the importance of absolute asepsis and cleanliness. To obtain this he invariably subjects his patients to examination under narcosis and at the same time thoroughly curettes the uterine cavity in corporeal cancer, or removes the soft sloughy tissue with the sharp spoon or scissors in cases of cervical epithelioma. The cautery is then freely applied, and for about a week or so vaginal douches are given, sometimes tannin and iodoform powder is applied, until a clean surface is obtained. Directly before the secondary operation he thoroughly scrubs the vagina with mollin containing 10 per cent. of creolin by means of a brush. He then proceeds to remove the uterus. He further lays great stress on the treatment of the stump and prefers the ligature to the clamp. The stump is to be inverted towards the vagina and the peritoneal wound carefully packed with iodoform gauze which may be safely left *in situ* for eight days.

I have now performed vaginal hysterectomy upon twenty-seven cases of uterine cancer, only two of which have succumbed to the operation, thus giving a mortality of less than 8 per cent.; one of these cases died from peritonitis, the other from intestinal obstruction caused by a piece of omentum becoming adherent to the roof of the vagina and constricting a loop of intestine. I opened this patient's abdomen on the sixth day and detached the omentum and released the constriction, the patient, however, died.

Recurrence in the site of disease within six months has taken place in three cases.

The ureters were divided in three cases, and in one old maiden lady in which I had to divide the perineum, recto-vaginal fistulæ resulted.

I have now placed as clearly as the time at my disposal will permit the result of these two operations. By comparing these results I hope to come to some conclusion as to which is the operation to be recommended in future. In doing this I propose to compare (1) the dangers coincident to the two operations ; (2) the immediate mortality after the operation ; (3) the periods of freedom from recurrence, and (4) general results.

1. Amongst the dangers, as I have pointed out, in vaginal hysterectomy, quite a number of patients have succumbed to intestinal obstruction due to some portion of the intestine becoming adherent to the edges of the vaginal wound. Dr. Krug nearly lost one patient by this cause and it was only by his timely intervention in examining the vaginal wound that he found a knuckle of intestine protruding through the wound. He broke down the adhesions with his finger, pushed the intestine back and introduced a plug of iodoform gauze and saved his patient. Should symptoms of intestinal obstruction appear, then, after this operation, no time should be lost in endeavouring to remove the cause.

This danger can never be feared after supra-vaginal amputation as the only portion of the peritoneum which is at all likely to be opened is Douglas's pouch, the peritoneal edges of which become glued together and the opening is securely closed within a few hours. The danger of ligaturing or dividing the ureters is a very serious one in the operation of total extirpation, as, should the disease extend laterally or the tissues be thickened by inflammatory mischief, it is impossible to recognise the different structures which present themselves, and it is obvious that in passing a needle through these tissues or in applying pressure forceps the ureter may very easily be included. This can readily be understood when the intimate relations of the ureter and uterine artery are remembered. This is a strong argument against performing vaginal hysterectomy when the disease is found to extend laterally, or presumably encroaches on the broad ligaments. In cases of supra-vaginal amputation this danger can never present itself. Vesico-vaginal fistulæ are by no means uncommon after vaginal hysterectomy, especially when the disease implicates the anterior portion of the neck of the uterus ; in such cases inflammatory thickening takes place in the cellular tissue between the bladder and uterus,

and it can be readily understood how in such cases the bladder may be torn. In cases suitable for the high operation this danger can rarely if ever exist. Peritonitis should rarely be anticipated after either operation if the vagina has been rendered thoroughly aseptic, either after the one operation or the other. This misfortune seems to be much more likely to follow vaginal hysterectomy when the broad ligaments are clamped than when the ligature is used. Haemorrhage both primary and secondary is liable to cause trouble after both operations, perhaps even more so after the high operation, as by the traction which is exercised during the removal of the diseased tissues the vessels become temporarily closed and at the time no bleeding points present themselves. When, however, the remaining portion of the uterus is returned and the pressure relieved, bleeding may take place. This accident no doubt would be less likely to follow if the cervix were removed by the galvano-cautery.

2. The immediate mortality after operation can only be obtained from the statistics which have been published. Dr. Byrne, who has been at much trouble to do this, has collected 1,273 cases of vaginal hysterectomy, which have been reported, and has divided them into different classes according to locality, thus :

Locality.	Operators.	Operations.	Deaths.	Per Cent.
Continental	...	14	944	137 14.5
British	...	8	74	15 20.0
United States	...	16	255	34 13.0
Total	38	1273	186	14.6

We may then safely place the immediate mortality after total extirpation as hitherto practised at about 10 per cent. Now if we compare these figures with the results after supra-vaginal amputation, we shall find that the result is very much in favour of the latter operation. Dr. Byrne tells us that in 400 cases in which he had performed the high operation by galvano-cautery he had no deaths, and Dr. Lewers, in 19 cases by the same method, likewise records no death. Dr. Baker, in a series of 28 high operations, had also no death. In 24 cases which I have reported I had only one death. The immediate risk, then, from this operation appears to be practically *nil*.

3. The length of time that the patient remains free from recurrence would appear to depend entirely upon degree. This is well exemplified, as by Drs. Terrier, Hartman, and Reed. According to the observations of these physicians, cases in which the disease has been recognised quite early, are practically cured by either operation; but, seeing the dangers which beset the major operation, and which are absent in the minor, surely it would be wiser to practise the latter.

4. It only remains for me to make a few remarks as to the choice of cases, and in doing this I shall perhaps not be far wrong in recommending surgeons to operate only upon those cases which are seen early, and in which the disease is limited to the vaginal portion of the uterus or to the cervix and cervical canal, the uterus being freely movable, and the disease not extending laterally along the broad ligaments or the cellular tissue between the peritoneum and the fornix. In such cases, no doubt, the results would be almost as good by adopting the one operation as the other, so far as the immediate mortality and chances of recurrence of the disease are concerned; but, taking into consideration the dangers and complication which may follow the major operation of removing the whole organ and destroying the roof of the vagina, I cannot but think that supra-vaginal amputation of the disease will not only maintain its high position, but that many of those surgeons who are at present opposed to it will gradually become converted, and will adopt the total extirpation of the entire organ only in those cases in which the disease is situated in or has extended to the body of the uterus.

Gentlemen, I trust I have not wearied you, but in examining into this subject I have endeavoured to the best of my ability to place before you fairly and dispassionately the results obtained by surgeons of all shades of opinion, trusting that we may profit by their experience, and in the future be able to bring the results of such experience to so bear upon our practice that the result of the operative treatment of cancer of the uterus may occupy a position in the annals of surgery and gynæcology that may prove a triumph of our art, and a lasting benefit to thousands of poor suffering women who may seek our aid.



## APPENDIX OF CASES.

---

IN illustration of these lectures, it will not be out of place to record short histories of cases on which I have operated for uterine carcinoma.

*First*, those cases in which the disease has not progressed so far as to preclude the hope of getting beyond it by supra-vaginal amputation of the os and cervix.

*Secondly*, those cases in which the disease has extended up the cervical canal so far as to render the minor operations doubtful, or in which the fundus of the uterus is implicated, and in which total extirpation of the entire organ alone gives any reasonable hope of eradicating the disease.

*Thirdly*, those cases in which the disease is so extensive as to preclude the possibility of removing it by any surgical interference, but in which much benefit may be hoped for by the judicious application of caustics.

### THIRTY-NINE CASES OF SUPRA-VAGINAL AMPUTATION OF THE CERVIX UTERI FOR CARCINOMA.

First, then, I will narrate short histories of thirty-nine cases of supra-vaginal amputation of the os and cervix, with a mortality of 5 per cent.

Twenty-five of these cases were embodied in a paper read by me before the British Gynaecological Society, December 8, 1892.\*

The cases I have selected are those in which I have operated during the years 1889 to 1894. With the exception of a few cases, the specimens have been microscopically examined and pronounced to be carcinoma; those cases which were of a doubtful character certainly presented macroscopically all the appearance of malignancy.

\* *British Gynaecological Journal*, vol. viii., p. 353.

*In the year 1889 I operated upon four cases.*

*Case 1.*—Mrs. B——, ætat sixty; large family. Duration of the disease several months. The os was deeply ulcerated and hardened, the cervix thickened and somewhat nodular. Uterus freely movable. Vagina free from disease. On May 1, 1889, I performed supra-vaginal amputation of the cervix, at the same time cutting out a large conical piece above the internal os, the apex of the cone extending nearly to the fundus. The patient made an excellent recovery, and had a good sound stump. She kept free from the disease until September, 1891, when recurrence took place, and the patient declined further operative interference.

*Case 2.*—Mrs. ——, ætat sixty-one; married, several children. The external os is ulcerated, the ulceration extending into the cervical canal. Bleeds freely; much induration. On July 16, 1889, I performed supra-vaginal amputation of the cervix. The patient made an excellent recovery, and remained free from disease until her death, which took place some two years afterwards from bronchitis. By the courtesy of Dr. McCaskie I was enabled to obtain the uterus, and there was no trace of recurrence.

*Case 3.*—Mrs. W——, ætat forty-two; married, four children; duration of the disease some six months. Os presents a ragged, ulcerated surface; the cervix is hard and thickened. Uterus movable, vagina free. On September 22, 1889, I performed supra-vaginal amputation of the os and cervix, curetting the endometrium, which was left. Patient made an excellent recovery, and is now free from any recurrence.

*Case 4.*—Mrs. H——, ætat forty-one; married, two children; duration of disease twelve months. Posterior lip is thickened and rough, deep ulceration extending into cervix; uterus movable, vagina free. Supra-vaginal amputation performed December 2, 1889. There was some free haemorrhage, which was arrested by plugging. Wound healed well, and the patient has had no recurrence until now. Suffered for some year or eighteen months with much pain and distress at the ordinary menstrual periods.

*During 1890 I operated on eleven cases.*

*Case 5.* — Mrs. W——, æstat fifty-four; married, two children; duration of disease said to be only five months. Os and cervix indurated and somewhat ulcerated; uterus enlarged, and only slightly movable. Supra-vaginal amputation performed February 2, 1890. The stump healed slowly, and the patient made a tedious convalescence. There was recurrence of the disease in three months.

*Case 6.* — Mrs. H——, æstat twenty-nine; four children. Has had an offensive discharge for six months. The cervix is hard and thickened and fissured; the os ulcerated, reddened and slightly irregular. Vagina free. Supra-vaginal amputation performed March 1, 1890. Patient made a good recovery, and is free from any recurrence. This was a doubtful case of carcinoma, although it had all the general appearance of cancer.

*Case 7.* — Mrs. C——, æstat fifty-four; widow, two children. Sister died of cancer of the uterus. She had noticed a discharge for eight months. Cervix enlarged and indurated. Vaginal surface not ulcerated. Offensive discharge. Uterus movable. Has had a good deal of haemorrhage. March 25, 1890, supra-vaginal amputation performed; rather severe haemorrhage. Patient made a good recovery, but had recurrence of the disease in a few months.

*Case 8.* — Mrs. S——, æstat forty-five; three children; duration ten months. Aunt died of cancer. Cervix enlarged, indurated, and ulcerated. Several isolated nodules on cervix. Uterus movable. April 20, 1890, supra-vaginal amputation. Patient made an excellent recovery, and has had no recurrence.

*Case 9.* — Mrs. B——, æstat thirty-five; married; duration eight months. Cauliflower growth from cervix. Uterus movable; vagina free. Supra-vaginal amputation, April 14, 1890. Patient progressed favourably for the first three days after the operation, when she had a rigour, and temperature rose to  $103.8^{\circ}$ , accompanied with vomiting. Some pus was let out, and a drainage-tube inserted. She had several more rigors, accompanied with high temperature, and died. Post-mortem revealed extensive pelvic cellulitis.

*Case 10.* — Mrs. H——, ætat forty-two ; married, six children ; duration of disease ten months. An irregular ulcerated growth is seen springing from the cervix, more especially from the posterior lip. Uterus mobile ; vagina free. Supra-vaginal amputation on May 20, 1890. In this case the disease extended higher than was anticipated. The endometrium was curetted, and the cavity of the uterus packed with strips of gauze soaked in a saturated solution of chromic acid. There was some sharp haemorrhage on the slough—the result of the chromic acid—separating. The patient, however, made a very good recovery, but the disease recurred in a few months.

*Case 11.* — Mrs. R——, ætat sixty ; two children ; duration of disease four months. Father died of cancer. Large cauliflower growth springing from cervix ; bleeds freely when touched ; uterus freely movable. Supra-vaginal amputation, August 9, 1890. Free haemorrhage ; vagina plugged with gauze. Patient made a good recovery. Lost sight of. When last seen, some months after operation, there was no recurrence.

*Case 12.* — Mrs. G——, ætat thirty-nine ; married, four children ; duration of disease twelve months. Cervix ulcerated and ragged ; uterus somewhat fixed ; offensive, blood-stained discharge. On July 26 supra-vaginal amputation performed. There was great difficulty in getting beyond the disease, and although the patient made a fairly good recovery, the disease recurred directly.

*Case 13.* — Mrs. P——, ætat forty-three ; married, eleven children ; duration of disease nine months. Irregular growth of considerable size springing from cervix. Left side of os more especially affected. Free haemorrhage at times. Supra-vaginal amputation, August 12, 1890. Patient made a good recovery, and there was no recurrence when last seen.

*Case 14.* — Mrs. O'C——, ætat fifty-four ; one child ; duration of disease six months. Extensive ulceration of os ; cervix hard and indurated. Uterus movable ; vagina free. Supra-vaginal amputation, November 7, 1890. Sharp haemorrhage ; forceps left on. Patient made a good recovery. No signs of recurrence at present time.

*Case 15.* — Mrs. R——, ætat fifty-seven ; married, one child ; duration of disease twelve months. Well-defined

roughened irregular growth from cervix, accompanied with profuse, very offensive discharge. Uterus freely movable. Vagina free from disease. Supra-vaginal amputation performed December 5, 1890. Patient made a good recovery, and has had no recurrence.

*In the year 1891 I performed ten operations.*

*Case 16.*—Mrs. H—, ætat fifty-one; widow; duration of disease twelve months. A hard, irregular mass springing from the os. Uterus freely movable; vagina free. Supra-vaginal amputation, January 30, 1891. Made good convalescence. No recurrence hitherto.

*Case 17.*—Mrs. N—, ætat forty-five; duration of disease eight months. An ulcerating mass protruding from cervix; uterus freely movable; vagina not implicated. Supra-vaginal operation February 16, 1891. Patient made a good recovery, and has had no recurrence hitherto.

*Case 18.*—Mrs. H—, ætat forty-seven; three children; duration of disease six months. Cervix infiltrated with growth; vagina free; uterus freely movable. Supra-vaginal amputation March 26, 1892. Stump cicatrized well. No recurrence hitherto.

*Case 19.*—Mrs. S—, ætat forty-five; married; duration of disease six months. Large cauliflower growth extending halfway down the vagina; uterus mobile; slight infiltration of vaginal walls posteriorly. May 17, 1891, the disease was cut away with scissors, and a deep cone-shaped piece excised from the uterus with scissors. Patient, who was in a weak condition, gradually became weaker, and died on June 3, 1891. Unfit case for this operation.

*Case 20.*—Mrs. S—, ætat forty-four; married, three children; duration of disease seven months. Os uteri deeply ulcerated, and cervix considerably thickened and hard. Supra-vaginal operation, May 29, 1891. Made good recovery. No recurrence hitherto.

*Case 21.*—Mrs. B—, ætat forty-five; married, no children; duration of disease twelve months. Large ulcerated mass protruding from cervix, implicating vaginal walls. Disease removed with scissors, July 12, 1891, and a deep conical-shaped piece cut out of the uterus. Patient made a good recovery, but the disease recurred three months later.

*Case 22.*—Mrs. M—, ætat forty-five; married, seven children; two miscarriages; duration of disease ten months. Large, hard ulcerated mass implicating both lips of os. Uterus freely movable; vaginal walls free. Supra-vaginal amputation, August 4, 1891. Patient made a good recovery, and has had no signs of recurrence.

*Case 23.*—Mrs. P—, ætat fifty-one; married, five children; duration of disease five months. Deeply ulcerated condition of os; cervix infiltrated and hard; uterus movable; vagina free. Supra-vaginal operation, December 5, 1891. Patient made a good recovery, and is free from recurrence at present.

*Case 24.*—Mrs. W—, ætat forty; eight children and two miscarriages; duration of disease said to be two years. Small eroded surface on posterior lip of os, with great thickening and induration of the cervix. This patient was treated for some time without any improvement. Supra-vaginal amputation, December 18, 1891. The disease was found to extend up the cervical canal, and a large conical piece of the uterus was removed, extending well above the internal os. Patient made an excellent recovery, and is quite free from recurrence at present.

*Case 25.*—Mrs. S—, ætat fifty-one; married, six children; duration of disease three months. A deeply ulcerated patch on posterior lip of os, the edges of which were irregular and everted; bleeds readily on examination. Supra-vaginal operation, December 19, 1891. Patient made a good recovery, and at present is free from recurrence.

*In the year 1892 I operated on six cases.*

*Case 26.*—E. H—, ætat fifty-one; widow. Admitted January 26, 1892. Has been suffering from an offensive discharge for some months. Os deeply ulcerated, bleeds readily on examination. Vagina free; uterus movable; cervix hard. Supra-vaginal amputation, and large cone-shaped piece removed, on January 30. Patient discharged February 23. Wound quite healed; no recurrence.

*Case 27.*—L. R—, ætat forty-five; married, three children. Os and cervix implicated, hard, and very painful. Sanious offensive discharge from os. Vagina free. Supra-vaginal amputation with cone-shaped piece on February 16,

1892. Discharged April 9. Wound healed; no discharge.

*Case 28.*—E. H—, ætat forty-seven; married, thirteen children. Whole os implicated, and bleeds readily. Vagina free. Supra-vaginal amputation March 26, 1892. Discharged April 23; wound healed.

*Case 29.*—M. B—, ætat forty-four; married, five children; admitted March 23, 1892, with pronounced cancer of os. Supra-vaginal amputation performed March 26. Discharged, wound healed, on June 11, 1892.

*Case 30.*—E. M—, ætat forty-five; married, seven children; admitted July 1, 1892. Has noticed a discharge for some months; of late it has been blood-stained at times. On examination a cauliflower excrescence is found to be growing from the os. The vaginal walls are not implicated. Supra-vaginal amputation on July 12, 1892. Discharged August 4.

*Case 31.*—A. R—, ætat thirty-seven; married, nine children; admitted November 14, 1892, with carcinoma of cervix. Has a good deal of discharge and pain. Os hard and ulcerated. Supra-vaginal amputation November 19, 1892. Discharged January 13, 1892; no recurrence.

*In the year 1893 I performed two operations.*

*Case 32.*—A. W—, ætat forty-eight; married, eight children; admitted May 22, 1893, with carcinoma of cervix. Has had offensive discharge for some months. Extensive ulceration of os, extending up cervical canal. Vagina walls free; uterus freely movable. Supra-vaginal amputation May 24, 1893. Douglas's pouch was opened July 15. Patient discharged well; no discharge or pain.

*Case 33.*—E. A—, ætat thirty-two; married, five children, youngest five years old; admitted July 31, 1893, with large cauliflower excrescence springing from os and very offensive discharge; bleeds readily; vagina free. August 1 supra-vaginal amputation was performed. Douglas's pouch was opened, a glass drainage-tube inserted, and vagina packed with iodoform gauze. September 21, patient discharged, wound healed, no sign of disease; recurrence some months later.

*Case 34.*—A. H—, ætat thirty-five; single; admitted January 29, 1894. Carcinoma of os and cervix. Vagina

free ; uterus movable. Discharge sanguous. January 31, 1894, supra-vaginal amputation. Discharged March 1, quite healed ; no recurrence.

*Case 35.*—E. B—, ætat forty-two ; married, five children ; admitted February 13, 1894. Os deeply ulcerated ; cervix hard and indurated ; bleeds readily. Vagina not implicated ; uterus freely movable. February 13 supra-vaginal amputation of os and cervix. Patient made uninterrupted recovery, and was discharged on March 7, quite healed, and no pain or discharge.

*Case 36.*—M. B—, ætat thirty-seven ; married, three children ; admitted February 13, 1894. Extensive ulceration of os and cervix ; considerable pain and discharge, occasionally blood-stained. March 7, supra-vaginal amputation performed. Patient discharged April 7, wound quite healed.

*Case 37.*—H. O—, ætat forty ; widow, four children ; admitted April 14, 1894. Cauliflower growth springing from os. Discharge very offensive. Vagina quite free ; uterus movable. On April 18 supra-vaginal amputation of os and cervix. Patient made an excellent recovery, and was discharged May 10, wound quite healed.

*Case 38.*—A. G—, ætat thirty-six ; widow, three children, one miscarriage ; admitted on May 11, 1894. Carcinoma of os and cervix. Suffers considerable pain. May 15 supra-vaginal amputation of os and cervix performed. Patient convalesced somewhat slowly, and was discharged on June 22, well.

*Case 39.*—E. P—, ætat forty ; married, six children ; admitted May 16, 1894. Os deeply ulcerated, disease extending up the cervical canal. Bleeds readily on examination. Discharge very copious and offensive. May 22 supra-vaginal amputation. Discharged well on June 30.

Such are the brief histories of these cases, of which twenty-eight recovered, and have had no signs of recurrence at the present. The time which has elapsed since the operation in these cases varies from one to three years. One case recovered from the operation, and remained free from recurrence for over two years, when the disease reappeared. In five cases, recurrence took place within a year of the operation. Two cases were lost sight of, but were free from recurrence when last seen, some time after the operation.

Two cases died, one from pelvic cellulitis and another from exhaustion. This latter case should hardly have been included in the series, as the disease was far too extensive to allow of anything but a palliative operation.

From these cases, I think, a valuable lesson may be learned, and I purpose to make a few remarks respecting cases 5, 7, 9, 10, 12, 19, and 21. In all these cases recurrence took place within a few months after the operation, or the patients died. It may be taken, therefore, that they were not benefited in any way by the operation ; and it may be assumed that they were cases unsuitable for this form of operation.

In Case 5 we find the disease is said only to have existed for five months, and digital examination merely discovered some induration of the os and cervix, and a slightly enlarged uterus, not very mobile. The speculum revealed some superficial ulceration. Here is a case in which, if the true significance of the enlarged and slightly-fixed uterus had been fully appreciated, such an operation as partial removal of the viscus would not have been attempted, as it is obvious from the very speedy recurrence of the disease that, although the cervix was thought only to be implicated, yet, in all probability, the disease commenced in the endometrium. In such a case the only operation that was at all likely to be of permanent service would have been total extirpation of the uterus, and even in such an operation some difficulty would have been encountered owing to the fixation.

Case 7 had noticed an offensive discharge for eight months. Here there was no ulceration of the os, but the cervix was enlarged and indurated. The uterus was freely movable. In this case there can be no doubt but that the disease commenced in the cervical canal, and, instead of extending downwards towards the os, as usually is the case, it passed upwards to the mucous membrane lining the body of the uterus. In removing the conical piece, while apparently the incision was carried well beyond the disease, there must have been some foci of malignant growth, extending either deeply into the muscular tissues or into the mucous surface, which was not removed. In this case, I think, vaginal hysterectomy would have been the better operation, or the cavity of the uterus should have been thoroughly curetted and packed with chloride of zinc wool.

Case 9 had a large cauliflower growth springing from the

os. The uterus was freely movable, and this, in my opinion, was a suitable case for supra-vaginal amputation. Probably, however, from the long contact with this foul growth, the mucous membrane of the vagina became impregnated with the septic discharge, and, notwithstanding the most scrupulous care, and use of antiseptic applications, the wound caused by the operation became infected, and pelvic cellulitis followed. In such cases, perhaps it would have been wiser to have introduced a glass drainage-tube, and packed the vagina with some antiseptic gauze.

Case 10 had all the appearance of being a favourable case for the high operation ; here, however, as in Case 7, the disease had evidently extended more deeply than was anticipated. No doubt, total extirpation would have been a preferable operation in this case.

Case 12.—Here again the uterus was somewhat fixed, and undoubtedly these cases are unsuitable for operation.

In Case 19 the vagina was involved to a slight extent, and a large cauliflower growth occupied the vagina. The patient was very reduced by septic absorption and loss of blood during the operation, which was undertaken purely as a palliative measure to relieve the poor woman of a putrid, badly-smelling mass. This case can hardly be included as one in which the high operation only had been performed.

Case 21, owing to the extent of the disease, would have been better treated by complete extirpation ; permission, however, for doing this had not been obtained, so that the course which, in my opinion, would give her the next best chance of getting rid of the disease was adopted.

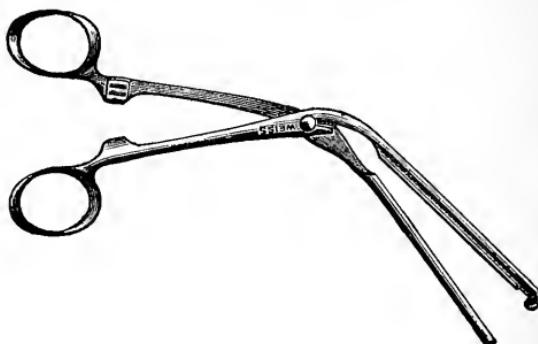
*Remarks.*—In the first place, I think it will be well to define my meaning of the term supra-vaginal amputation. It is not the mere amputation of the cervix, but the removal of the cervix with a large cone-shaped piece above from the body of the uterus.

I am quite in accord with Dr. John Williams, Schroeder, and Hoffmeier, whose statistics go conclusively, I think, to show that where carcinoma of the uterus is seen early, and the disease is limited to the vaginal portion of the organ, supra-vaginal amputation is all that is necessary, and it is useless to put patients to the extra risk of total extirpation of the uterus. Gusserow gives the mortality after supra-

vaginal amputation when performed by the knife at 9.09 per cent., and when by the galvanic cautery at 7.75 per cent., while Post, in the *American Journal of Obstetrics*, November, 1887, in 700 cases of vaginal hysterectomy he had collected, asserts that the mortality after this operation is 24 per cent. Since these statistics were collected, no doubt, the methods adopted for the removal of the uterus per vaginam are much improved, but even now Martin of Berlin gives his mortality at 16.6 per cent., while, however, Leopold and Scengen acknowledge to a mortality of only 6.2 and 8.3 per cent. respectively. There can be no doubt, I think, that the deaths after supra-vaginal amputation are considerably less than after vaginal hysterectomy, and, in suitable cases, I think I have shown that the results obtained are such as to warrant us in advising the former operation in preference to total extirpation in suitable cases.

TWENTY-EIGHT CASES OF VAGINAL HYSTERECTOMY FOR  
CARCINOMA, AND TWO FOR MYOMA OF THE UTERUS,  
WITH TWO DEATHS.

A paper in which these cases were recorded was read by me at the British Medical Association meeting at Bristol, August, 1894. Before recording these cases, I will give a short description of the clamp referred to on page 37. It occasionally happens in performing vaginal hysterectomy that one meets with a case in which the broad ligaments are very short and somewhat thickened, in consequence of which the tilting of the uterus, by either retro- or ante-version, is rendered very difficult. In such cases the application of the ligature is most difficult. It is in such instances that compression forceps may be of considerable value. Messrs.



Weiss and Son have made for me some forceps, which I think are well suited to these cases; they are light, and at the same time strong. By reference to the engraving, it will be seen that they are composed of two distinct portions, one furnished with a pin at the point of union, and the other being deeply notched out so as to work around the pin. The blades are so arranged that one has a centre-bar, which is slightly deeper at the distal end than at the proximal, and extending the whole length of the blade there is a corresponding depression in the opposing blade into which this bar fits. By this arrangement, when the forceps are securely closed, the thinner tissues at the upper

part of the broad ligament, as well as the thicker parts at the vaginal end, are firmly gripped, and I believe it would be impossible for either the uterine or ovarian artery to slip.

The blades being made separately enables the operator to introduce one blade at a time if he wishes, and this separation of the blades is also of service in enabling the forceps to be kept absolutely aseptic.

I am indebted to Mr. West, my house-surgeon, for the notes of all the cases which occurred in the Cancer Hospital.

*Case 1.*—A. C—, ætat thirty-seven; married, no children; consulted me on March 18, 1892, complaining of offensive discharge, sometimes blood-stained; first noticed discharge a year ago; has lost much flesh.

*Present Condition.*—A growth of considerable size, hard, ulcerated in places, occupies the os; bleeds readily, and causes much pain; uterus somewhat enlarged. Vaginal hysterectomy performed by me March 25; patient made excellent recovery, and is at present free from recurrence. Microscopic examination—carcinoma.

*Case 2.*—M. E—, ætat fifty-three; married, six children; admitted under my care into Cancer Hospital July 4, 1892, complaining of pain in back and left iliac region. Patient has had a badly-smelling discharge for ten months, with slight haemorrhage; menopause six years ago.

*Present State.*—There is a cauliflower growth springing from the os, which has ulcerated, and bleeds readily on examination. Vaginal wall quite free; uterus freely movable.

*July 10.*—Vaginal hysterectomy performed. Patient made an excellent recovery, and is at the present time free from recurrence. Microscopic examination—carcinoma.

*Case 3.*—W. C. S—, ætat forty-six; married, five children; consulted me July, 1892, suffering from slight discharge, which had lasted about six months; about three months ago had haemorrhage, which has recurred from time to time since.

*Present State.*—Os ulcerated and widely dilated, readily admitting finger; bleeds readily, and, indeed, somewhat profusely. A smooth, soft substance is felt in uterus; uterus movable, but the left broad ligament appears somewhat thickened.

*July 7.*—Vaginal hysterectomy performed; microscopic

examination—medullary carcinoma. Patient free from disease present time.

*Case 4.*—E. B—, ætat thirty-eight; admitted into the Cancer Hospital December 22, 1892, suffering from carcinoma of the uterus; sent to me by Mr. Scharlieb, M.D. Patient is married, has had four children, and one miscarriage; no family history of cancer. Patient had inflammation of the uterus six years ago; has never felt strong since; had a thin watery discharge till six months ago, when she had a severe flooding, and since this the discharge has been blood-stained and very offensive; suffers great pain; says she has not lost flesh.

*January 3, 1893.*—Vaginal hysterectomy performed; discharged convalescent February 25, 1893.

*July, 1894.*—She presented herself for examination, when slight recurrence was discovered.

*Case 5.*—L. P—, ætat fifty-seven; married, two children; consulted me in October, 1892, complaining of haemorrhage and bearing-down pains; menopause ten years ago.

*Present State.*—There is slight discharge coming from the uterus, not offensive; uterus retroflexed, but not, apparently, enlarged; sound is passed with some little difficulty, and causes haemorrhage. Microscopic examination—adenocarcinoma.

*October 27.*—Vaginal hysterectomy performed; made good recovery; no recurrence at present.

*Case 6.*—A. K—, ætat thirty-six; married, no children or miscarriages; admitted into the Cancer Hospital May 15, 1893; under my care; suffering from carcinoma of the cervix. Patient sent by Dr. Heywood Smith.

*History from Patient.*—Patient has had pain in the lower part of abdomen and in the back for the last eight months; had discharge for the same period, which has latterly become more watery and offensive. Patient had a severe flooding April 10, 1893, other floodings less severe since.

*Family History.*—Mother died of cancer of the throat, age forty-two; no other history of malignant disease or of tumour.

*Present Condition.*—Healthy-looking woman, and fairly well nourished. In the situation of external os is an ulcer admitting the forefinger for about an inch; the walls of

cavity are formed by hard tissue, which extends more to the left side ; vaginal walls are free ; the uterus bimanually appears freely movable, though the left broad ligament appears slightly involved ; examination causes some bleeding.

*May 16, 1893.*—Vaginal hysterectomy was performed ; disease was more extensive on the left side ; the whole of the uterus was removed ; about half an inch of the left ureter was removed with the growth. Patient lost little blood ; all the forceps were removed. Vagina was packed with iodoform gauze. The ovaries and tubes were not removed. Operation lasted about an hour and a quarter.

Patient made a good recovery, although urine still escaped by the vagina. She was furnished with a pessary with an indiarubber funnel, which was conducted into a urinal fastened round leg, and discharged May 31, 1893. The disease recurred in a few months.

*Case 7.*—C. J. E—, ætat forty-two ; has been a widow for the last six years, no children ; admitted into the Cancer Hospital June 24, 1893 ; under my care ; suffering from uterine carcinoma. Sent by Dr. Pedler.

*History from Patient.*—Patient has been always regular every month, until two and a half years ago, when she lost a good deal of blood and clots per vaginam, and had much pain ; has lost much strength and flesh. Dr. Heywood Smith, three weeks ago, dilated the os and curetted the uterine cavity ; the scrapings were examined microscopically by Dr. Bousfield, who pronounced the growth to be an encephaloid carcinoma.

*Present Condition.*—Patient is an anæmic, poorly-nourished woman ; the cervix uteri is normal, but the body of the uterus is enlarged to about the size of a large orange, appears hardish and globular, freely movable ; the left broad ligament feels thicker than normal.

*July 1, 1893.*—Under ether vaginal hysterectomy was performed. The vagina was very small, and the uterus being enlarged, it was difficult to remove. It not being possible to antevert or retrovert the organ, it was pulled straight down ; the broad ligaments each side were tied with silk, the ovaries were not removed. The uterus after removal was much enlarged, about the size of a small cocoa-nut. On section the uterine walls were considerably thickened, a

whitish, somewhat hard growth was seen surrounding the uterine cavity, soft matter, looking like brain substance, occupying the place of the mucous lining of uterus.

I saw the patient in about eight months with Dr. Pedler, when her left leg was much swollen, and there was a tumour in the abdomen, evidently malignant, and she died nine months after the operation.

*Case 8.*—E. S—, ætat fifty-two; married, three children; consulted me, July, 1893, suffering from a badly smelling discharge. Menopause four years previously. She had had bleeding from time to time, especially when riding in cabs or omnibuses; has suffered a good deal of pain. Microscopic examination—round-celled sarcoma.

*Present State.*—A growth is seen projecting from the os, soft, and bleeding readily. Uterus quite movable, and not enlarged. Vaginal walls not implicated.

*July 30.*—Vaginal hysterectomy performed. Patient made an excellent recovery; no recurrence.

*Case 9.*—H. D—, ætat fifty-eight; married, six children; consulted me February, 1893, for a disagreeable badly-smelling discharge. On examination the os was found to be eroded and deeply fissured, the cervix hard; and on passing the sound the endometrium was found to be roughened. The menopause had occurred ten years previously, and before seeing me she had had frequent admixture of blood with the discharge. On February 20 I performed vaginal hysterectomy. Patient made an excellent convalescence. On opening the uterus a growth was discovered, which on microscopic examination was pronounced to be adeno-carcinoma. No recurrence.

*Case 10.*—S. J—, ætat sixty-three; single; was seen by me in consultation with Dr. Gross in July, 1893. I had previously removed some growth from the uterus of this patient, which proved to be round-celled sarcoma. In consultation with Dr. (now Sir) John Williams and Dr. Gross, it was agreed that vaginal hysterectomy should be advised; this the patient agreed to, and on July 6 I removed the uterus per vaginam. Owing to the smallness of the vagina I divided the perineum. The patient made a good convalescence, but the disease recurred in the left broad ligament in about three months after the operation. She died within six months.

*Case 11.*—Mrs. H—, ætat thirty-five; married, two children; was sent to me by Dr. Cullingworth in July, 1893. Patient had had discharge for eighteen months, and bleeding from time to time. Suffered great pain at bottom of back.

*Present Condition.*—A large ulcerated surface occupies position of os, extending to vaginal roof; bleeds on examination; badly-smelling discharge; uterus movable, but the disease appears to have infiltrated the cellular tissue around cervix. Microscopic examination—sarcoma.

On July 17 I performed vaginal hysterectomy. Patient did very well for first two days, then symptoms of septic peritonitis set in, and patient died on the fifth day.

*Case 12.*—Mrs. S—, ætat fifty-five; married, three children; menopause about five years ago; sent me by Mrs. Garrett Anderson, who saw her in July, 1893. She had been suffering from discharge for some months, and had recently a good deal of haemorrhage. Mrs. Garrett Anderson dilated the os and removed a small piece of growth with the curette, which microscopic examination proved to be malignant. I performed vaginal hysterectomy on July 7. The patient made an excellent recovery.

This patient came to see me in April, 1894, suffering from intestinal obstruction. She had a hard nodule situated, apparently, on the ascending colon. As the symptoms were urgent I advised immediate abdominal section. On opening the abdomen the nodule referred to was evidently malignant; there was a second growth also found at the junction of the descending colon and the sigmoid flexure. I fastened the cæcum to the abdominal wound, and opened it the next morning. The patient sank, however, from exhaustion. No recurrence of disease locally.

*Case 13.*—E. A—, ætat thirty-two; admitted into the Cancer Hospital on July 31, 1893; under my care; suffering from uterine carcinoma; sent me by Dr. Butler Smythe. Patient is married, and has had five children; no miscarriages; the last child five years ago. Patient has had vaginal discharge, at times stained with blood, for the last five or six months; has had severe pain in the back and lower part of abdomen for the last three months.

*Present Condition.*—Fairly healthy, though poorly-nourished woman. In the situation of external os is an

ulcerated cavity admitting the tip of forefinger. Uterus movable ; the ulcerated surface extends more to the left ; examination causes some bleeding.

*August 1.*—Vaginal hysterectomy was performed ; glass drainage-tube inserted into wound of peritoneum ; vagina packed with iodoform gauze.

*September 21.*—Patient discharged well, without pain or discharge ; wounds in vaginal roof quite healed.

*Case 14.*—E. D—, ætat fifty-seven ; admitted into the Cancer Hospital August 1, 1893 ; under my care ; suffering from uterine carcinoma. Sent by Dr. Heywood Smith and Dr. Hunter.

*History.*—Patient is married, and has had four children and three miscarriages ; the last pregnancy was fifteen years ago. Patient has had vaginal discharge for the last year ; for the last six months patient has noticed blood occasionally in the discharge ; for the last fortnight discharge has become more watery and offensive. Has lost much flesh, and has had much pain in the lower part of abdomen and back latterly.

*Present Condition.*—Healthy-looking and well-nourished woman. In the situation of external os is an ulcer admitting the tip of the forefinger ; uterus freely movable ; examination causes some bleeding ; the walls of ulcer are formed by hard tissue.

*August 5, 1893.*—Vaginal hysterectomy was performed. Patient recovered without a bad symptom, and was discharged September 9, without any pain or discharge, wound quite healed. Patient has gained 8 lb. in weight during her stay in the hospital.

In November patient consulted me again, suffering from violent vomiting. On examination stomach was found much dilated, and a distinct tumour, the size of a small apple, could be felt at the situation of the pylorus. The vaginal roof was quite healthy, and no growth could be felt in the pelvis ; the patient gradually sank. A post-mortem was declined, but presumably she died of carcinoma of the pylorus, or enlarged glands pressing on the pylorus. No recurrence of disease locally.

*Case 15.*—M. I—, ætat forty-one ; married, two children ; consulted me August 2, 1893, complaining of disagreeable discharge and occasional haemorrhage, accom-

panied by constant bearing-down pains and irritation of the bladder.

*Present State.*—Os deeply ulcerated ; cervix hard and resisting, bleeding freely on examination ; discharge offensive ; vagina free ; uterus freely movable. Vaginal hysterectomy, August 12 ; patient made rapid recovery ; no recurrence ; microscopic examination—epithelioma.

*Case 16.*—C. L—, ætat forty-five ; married, no children ; consulted me September, 1893, suffering from haemorrhage. Patient says she has had slight discharge for some little time. Of late between the periods has had sudden gushes of blood after any exertion ; examination with sound causes bleeding ; sound enters just over normal distances ; microscopic examination—adeno - carcinoma. Vaginal hysterectomy performed September 26. Patient made a good recovery, and is now free from recurrence.

*Case 17.*—M. J—, ætat thirty-three ; was admitted under my care into the Cancer Hospital in October, 1893, suffering from sarcoma of the uterus. Patient has been married eleven years ; has had two children and two miscarriages ; the last pregnancy was three years ago, which terminated in a miscarriage, the patient being then five months pregnant. Sent to me by Dr. Barbour.

*Present Condition.*—Patient is losing blood from uterus in considerable quantity ; no tumour is palpable in abdomen ; per vaginam the cervix is enlarged ; no ulceration or erosion visible by the speculum ; blood is seen coming from external os ; bimanually the uterus feels enlarged to about the size of a small cocoanut, freely movable ; the sound passes  $3\frac{1}{2}$  inches.

*October 10.*—Patient was placed under the influence of ether, and the cervical canal was dilated with Hegar's dilators to No. 24 ; the finger was introduced into the uterine cavity ; the mucous membrane felt roughened in places, and very hard. A small polypus about the size of a filbert nut was felt at the fundus uteri. The interior of uterus was then scraped with a curette, and the uterus was washed out. A microscopic examination of scraping proved the growth to be a round-cell sarcoma.

*October 13.*—As a result of the microscopical examination patient was strongly advised to have hysterectomy performed, to which she consented. On October 13, under ether, the uterus was removed through the vagina.

The uterus on removal appeared more globular in shape than normal, and about the size of a two months' pregnancy, the peritoneal coat appearing normal. On section the walls of the uterus were considerably thickened. Patient made an excellent recovery, and is still free from any recurrence.

*Case 18.*—A. S—, ætat forty-seven; married, three children; was sent to me by Dr. Barnes, suffering from discharge and haemorrhage, December, 1893.

*Present State.*—Well-defined irregular growth from cervix, extending upwards in cervix; ulcerated, and bleeding readily on examination; some thickening in broad ligament; body of uterus rather larger than normal. Vaginal hysterectomy December 13, 1893. Patient made an excellent recovery, and has had no recurrence.

*Case 19.*—A. G—, ætat fifty-two; admitted on December 11, 1893, into the Cancer Hospital, suffering from cancer of the body of the uterus.

*History.*—Patient has been a widow for the last thirty years; had one child thirty years ago. For the past three years has had a blood-stained discharge, and has had several rather severe losses of blood during this period. Just before the discharge came on patient had been quite regular every month. In November, 1893, patient was under the care of Dr. Heywood Smith. She was then anæsthetized, the uterus explored, and some growth removed for microscopical examination, which subsequently proved to be cancerous.

*Past History.*—Patient had her breast amputated six years ago at St. George's Hospital by Mr. Pickering Pick; very extensive scar now present; no recurrence of disease.

*Present Condition.*—Fairly well-nourished woman. On vaginal examination by means of a Ferguson's speculum, the os is hard, with everted lips, blood-stained, and some very offensive discharge seen issuing from external os. On bimanual examination the uterus feels slightly enlarged, though freely movable; sound not passed.

*December 12, 1893.*—Vaginal hysterectomy performed. Patient made an excellent recovery, and on January 13 was discharged convalescent. The disease recurred in six months after operation.

*Case 20.*—F. St. J—, ætat forty-four; admitted on January 4, 1894, under my care, into the Cancer Hospital,

suffering from cancer of the uterus. Complains of great pain in the lower part of abdomen. Per vaginam the cervix feels hard, and is thickened and eroded. Body of uterus feels enlarged. Some bosses felt on the posterior surface of uterus; sound passes  $3\frac{1}{2}$  inches. Some foul vaginal discharge.

*January 9, 1894.*—Under ether, vaginal hysterectomy performed. Both ovaries and tubes also removed.

*February 14.*—Patient discharged; wound quite healed. No recurrence of disease.

*Case 21.*—A. M—, ætat thirty-one; admitted into the Cancer Hospital on January 29, 1894; under my care; suffering from carcinoma of the cervix. No family history of cancer.

*History.*—Patient is married, has had four children, the last child born five years ago. Has suffered from foul vaginal discharge for the last three or four months; the discharge has latterly become stained with blood. Has had very little pain, and states she has not lost flesh latterly.

*Present Condition.*—Very pale, anæmic-looking woman. On vaginal examination there is a large cauliflower growth on the cervix. The disease extends rather more on the right side; uterus freely movable; vagina not diseased.

*Operation.*—On January 30, 1894, under ether, vaginal hysterectomy was performed. Patient made a good recovery, and was discharged February 28. The disease recurred within six months.

*Case 22.*—E. J. C—, ætat sixty-two; admitted into the Cancer Hospital on February 10, 1894, suffering from sarcoma of the body of the uterus.

*Family History.*—Mother died of cancer of the liver.

*History.*—Patient has had a very offensive discharge and pain in the back and lower part of abdomen for the last six months. On November 27, 1893, at the Samaritan Hospital, the cervical canal was dilated and the uterus explored; some soft growth was scraped away for microscopic examination, which subsequently proved to be malignant.

*Present Condition.*—Very emaciated-looking woman; heart and lungs normal. On vaginal examination the vaginal canal was found to be very small. The cervix feels healthy, and the uterus bimanually is freely movable, and

not appreciably enlarged ; examination causes much pain. There is a foul discharge ; the speculum not used, on account of smallness of vagina.

*February 20.*—Under ether vaginal hysterectomy was performed ; the perinæum was first divided, on account of the smallness of vaginal outlet. Unfortunately, in this case the recto-vaginal septum was torn, and a fistula established. This was closed subsequently by operation. On section of the uterus, which was only slightly enlarged, there was a diffuse soft growth, forming more or less irregular projections on the surface of the mucous membrane. The growth was most abundant near the orifices of the Fallopian tubes.

*February 28.*—Patient rapidly recovering. Patient continues free from any recurrence.

*Case 23.*—E. C—, ætat forty-four ; admitted into the Cancer Hospital on February 19, 1894 ; under my care ; suffering from epithelioma of the vulva and carcinoma of the cervix uteri. No family history of cancer. Patient has been married twenty-three years, has had thirteen children, no miscarriages ; the last child four and a half years ago ; has had vaginal discharge for the last six months, which latterly has become more watery and offensive. Patient first noticed growth of vulva about six months back, which has been growing steadily since ; has lost much flesh and strength lately ; has suffered very little pain. Sent to me by Dr. Sunderland.

*Present Condition.*—Fairly well-nourished woman. In the left labium is a growth about the size of a hen's egg ; the growth has ulcerated, and has hard everted and sinuous edges. Per vaginam, in the situation of external os, is an ulcerated cavity, admitting the tip of the finger ; the walls of cavity are formed by hard tissue ; the uterus is freely movable, and the vagina is free from disease.

*February 27.*—Under ether the growth from the vulva was first freely excised. Vaginal hysterectomy was then performed.

Patient made an excellent recovery, and was discharged March 21. Patient is free from recurrence.

*Case 24.*—L. M—, ætat forty-seven ; single ; admitted on March 7, 1894, under my care, into the Cancer Hospital, suffering from carcinoma of cervix uteri. No family history of cancer.

*History.*—Patient has had a foul discharge from the vagina for the last eight months, which latterly has become more watery and is sometimes blood-stained; has suffered very little pain. Saw Dr. Cullingworth at St. Thomas's Hospital in February, 1894, who sent her to me.

*Present Condition.*—Somewhat advanced cancer of cervix uteri; uterus not fixed; disease extends more to the left side.

*March 13, 1894.*—Under ether vaginal hysterectomy performed.

*April 13.*—Patient discharged, wound firmly healed; no discharge or pain. Disease recurred in this case somewhat rapidly.

*Case 25.*—E. B.—, ætat thirty-one; married, six children, youngest two years; admitted on March 8, 1894, into the Cancer Hospital; under my care; suffering from cancer of the uterus.

*Family History.*—Uncle, on father's side, had cancer of stomach.

*History.*—Has had foul vaginal discharge since November, 1893; has had pain in lower part of abdomen for the last month; a large cauliflower growth of cervix; uterus freely movable; vaginal walls not affected with disease.

*March 13.*—Under ether vaginal hysterectomy performed. The uterus was easily pulled down with vulsella forceps; uterine arteries tied with silk; the cut edges of peritoneum were pulled down with forceps; glass drainage-tube used, and vagina packed around tube with iodoform gauze; operation lasted half an hour.

*March 14.*—Glass drainage-tube removed.

*March 15.*—Iodoform gauze removed.

*March 17.*—Patient very sick and somewhat collapsed; bowels not open since operation; ordered ʒss. of sodii sulphatis in hot water.

*March 18.*—Bowels still not open; vomiting more severe; some abdominal distension; no tenderness; ordered an enema.

*March 19.*—Patient getting worse; vomiting and abdominal distension more severe; vomiting not faecal. Abdominal section performed; a portion of small intestine was discovered strangulated by a piece of adherent omentum. The gut was released, and the omentum was ligatured

in two or three places and cut off. The peritoneal cavity was washed out with salt solution. Keith's drainage tube was used.

*March 20.*—Patient died from shock ; no peritonitis at post-mortem examination.

*Case 26.*—S. M—, ætat fifty-four ; married, ten children and two miscarriages ; admitted on May 30, 1894, under my care, into the Cancer Hospital, suffering from cancer of the body of uterus. No family history of cancer.

*History.*—Patient has had a foul vaginal discharge for the last eighteen months, and for the past three months has had much pain in the lower part of the abdomen ; was in the Sussex County Hospital, Brighton, during March, 1894, under Dr. Paley's care, who is reported to have removed some scrapings from interior of uterus, which microscopic examination proved to be cancerous.

*Present Condition.*—Cervix feels small and atrophied ; body of uterus felt bimanually feels very hard ; movable ; not enlarged ; blood-stained discharge from os.

*April 10.*—Under ether vaginal hysterectomy performed.

*May 3.*—Patient discharged ; wound firmly healed.

*Case 27.*—F. R—, ætat fifty-seven ; married, three children. Dr. Walker asked me to see this patient with him in April, 1894. Patient always enjoyed good health until four years ago, when she had some violent haemorrhage and she felt a tumour in her abdomen. She consulted a specialist for this, and a fibroid sloughed from the uterus. From that time until a few months ago she kept fairly well, when she noticed a discharge, and experienced a good deal of pain in getting about.

*Present State.*—There is a well-marked tumour, readily felt, deeply situated in the pelvis ; the parietes are flaccid, and admit of ready examination ; the os feels healthy, no erosion or ulceration ; uterus readily movable. The growth is evidently in the body of the uterus. There is a sanguous, badly-smelling discharge from os. Sound passes four inches.

Combined vaginal and abdominal hysterectomy performed on April 19. The combined operation was necessitated from the size of the growth. The patient made an excellent recovery, and is now able to get about well, and is free from recurrence. Microscopic examination—sarcoma.

*Case 28.*—S. L—, ætat fifty-six ; married, three children ; consulted me in April, 1894 ; has suffered for some time from haemorrhage at intervals. Menopause nine years ago.

*Present Condition.*—Os papulous ; body of uterus enlarged, and somewhat soft to the touch ; bleeds readily ; cervix slightly dilated ; no ulceration or erosion of os.

Vaginal hysterectomy April, 1894. Patient made an uninterrupted recovery, and is now quite free from any sign of recurrence.

*Case 29.*—H. K—, ætat fifty-four, was admitted to the Cancer Hospital, under my care, on July 8, 1893, suffering from a large fibro-myoma of the uterus. Patient is married, and has eight children ; the last child was born twelve years ago.

*History of Illness.*—Patient has had swelling of abdomen, and constant attack of haemorrhage from the vagina, for the last twelve or thirteen years. The attacks of haemorrhage latterly have become much more frequent and more severe, and are seriously undermining patient's health.

*Present Condition.*—Patient is a fairly well-nourished woman of average height, markedly anæmic. There is a rounded tumour felt in the lower part of abdomen, rising out of the pelvis, about the size of a foetal head. The tumour feels as though it were solid, is centrally situated, and is smooth on the surface. On bimanual examination, the tumour is clearly the enlarged uterus. The uterine sound was not passed.

*July 13, 1893.*—Under ether an incision was made in the middle line of abdomen, about four inches long, and commencing just below the umbilicus. The peritoneal cavity was opened along the whole length of incision in the usual way. The tumour then appeared in the wound about the size of a foetal head. The broad ligaments were securely tied on each side with silk. Small anterior and posterior flaps were then dissected from the tumour with scissors in the direction of the vaginal fornices. A long Ferguson speculum was introduced into the vagina and held in place by an assistant and the vaginal roof opened. When the uterine arteries were reached they were tied with silk in two places and divided between. The vaginal fornices were then cut through from above, and the whole uterus was

removed *en masse*. The bleeding points in the stump were tied with silk, and the ligatures, left long, were drawn through the opening made in the roof of vagina. The two flaps had silk ligatures passed through them from without inwards, so that the ends of ligatures passed from the raw surface over peritoneal surface. They were not tied, but were also pulled through the roof of vagina, so as to turn in the two peritoneal surfaces of the flaps. The vagina was then packed with iodoform gauze; a winged catheter was left in the bladder. The operation lasted about an hour and a half. The growth was chiefly in the anterior wall of the uterus. Patient made a good recovery, and was discharged August 1.

*Case 30.*—K. F—, ætat forty-five; admitted on January 17, 1894, suffering from fibroid tumour of the uterus, with retroflexion; under my care.

*History.*—Patient has been married nine years, no children or miscarriages; has had most severe bearing-down pains for the last eight or ten months. During the last two months the pain has become almost unbearable. Patient was in this hospital September, 1893; was then examined under ether. The uterus was felt firmly retroflexed in the pelvis; some bosses were felt on the surface of uterus, which was considerably enlarged; the uterus could not be replaced by the sound. Patient has tried various pessaries without any relief; is regular in her periods, though she has always suffered much pain. Does not lose much.

*January 23.*—Under ether the uterus was with much difficulty removed through the vagina.

*January 26.*—Patient doing extremely well. To be syringed out every morning with iodine water through a Ferguson's speculum, and a strip of iodoform gauze replaced.

*February 24.*—Patient discharged convalescent.

*Remarks.*—From a perusal of these cases it will be noticed in four instances a recurrence of the disease *in situ* took place within six months, the patients dying within the year. These cases, therefore, may be said to have derived no benefit from the operation, and therefore were unsuitable cases for operative interference. Two cases died directly from the operation. The cause of death in one case was septic peritonitis, in another intestinal obstruction due to

the omentum becoming attached to the opening in the roof of the vagina. Two cases had carcinomatous deposits elsewhere, one in the large intestine causing obstruction, and the other presumably in the pylorus ; in neither of these cases was there any return of the disease locally.

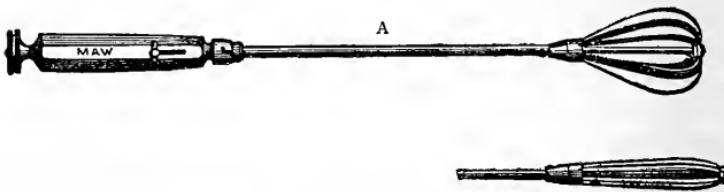
Three cases were free from recurrence two years after operation ; in all of these the disease was apparently limited to the os and cervix uteri. One case was free from recurrence eighteen months after operation.

The lessons to be learnt by the histories of these cases is the importance of early diagnosis, as if the disease has extended to the broad ligaments, or into the cellular tissue around the cervix, it is pretty certain to return very quickly, and I would impress on all practitioners the absolute necessity of vaginal examination in all cases in which a patient presents herself suffering from vaginal discharge. In women who have passed the menopause, should they complain of haemorrhage ever so slight, or purulent discharge, perhaps streaked with blood, it is almost certain that they are suffering from malignant disease of the uterus in some form or the other. The fact of the os and cervix being free from any sign of ulceration is often most deceptive. But a case must never be allowed to pass if there is bleeding, without a thorough examination of the uterine cavity as well as the portio vaginalis. If such a plan were adopted, and became a recognised rule, many a poor woman's life might be saved from the horrible scourge of cancer of the uterus.

TEN CASES IN WHICH EXTENSIVE CARCINOMA OF THE  
UTERUS WAS TREATED BY CAUSTICS.

The cases embodied under this head were all very advanced cases, and all were relieved by removing the disease with the dredger and caustics, as described in the page 23, and were discharged in most instances without any appreciable amount of the disease being recognisable by most careful examination. Many of these patients remained free from recurrence for some time, and some are still apparently free from disease.

In two of the earlier cases the caustic ate through into the rectum, and caused considerable trouble; but in the later cases, with more experience in applying the caustic, this disaster has not occurred.



UTERINE DREDGER.

(A) Instrument opened. (B) Instrument closed.

The pain after the application is in nearly all cases not complained of; indeed, in most cases the patients express themselves the next morning as free from pain, and as having been relieved of the terrible pain they had experienced before.

All that can be claimed for this form of treatment at present is that the patients' lives are prolonged, and they are relieved of much suffering, and from the horrible offensive discharge and bleeding. They gain flesh, and are in every respect improved in health.

I am indebted to Mr. West, my house-surgeon, for the notes of all these cases.

*Case 1.—H. M—, ætat forty-six; widow, three children, youngest twenty-three; admitted with advanced*

cancer of cervix uteri, on May 18, 1893, into the Cancer Hospital.

*May 21, 1893.*—Under ether, as much disease as possible was scraped away with uterine dredger, and the uterine cavity packed with chloride of zinc wool; vagina packed with tampons soaked in a saturated solution of bicarbonate of soda.

*May 23.*—Tampons removed from vagina.

*May 26.*—Chloride of zinc wool removed.

*May 30.*—Large slough removed. An entire cast of uterus.

*July 1.*—Patient discharged; no discharge and free from pain.

*Case 2.*—M. T—, ætat sixty-four; married, one child; admitted on June 1, 1893, into the Cancer Hospital, suffering from advanced cancer of cervix uteri.

*June 6.*—Under ether, growth scraped with the dredger, and uterus packed with chloride of zinc wool; vagina packed with tampons soaked in a saturated solution of bicarbonate of soda.

*June 8.*—Vaginal tampons removed.

*June 11.*—Chloride of zinc wool removed.

*June 13.*—Large slough removed from uterine cavity.

*June 28.*—Uterus packed again with zinc chloride wool.

*July 1.*—Zinc chloride removed.

*July 3.*—A slough composed of entire cast of uterus removed.

*July 13.*—Patient discharged, very much improved; no pain or discharge to speak of.

*Case 3.*—M. M—, ætat thirty-eight; married, has had twelve children, the last child born eighteen months ago; admitted on June 10, 1894, into the Cancer Hospital, suffering from advanced cancer of cervix uteri.

*June 17.*—Growth scraped away as much as possible with the uterine dredger, and uterus packed with chloride of zinc wool; vagina packed with tampons soaked in a saturated solution of bicarbonate of soda.

*June 19.*—Tampons in vagina removed.

*June 20.*—Chloride of zinc wool removed, and uterus well syringed out through Ferguson's speculum with iodine water.

*June 28.*—Chloride of zinc wool again packed into uterine cavity.

*July 3.*—Chloride of zinc wool removed.

*July 7.*—Large slough removed.

*July 20.*—Patient discharged much improved; very little discharge or pain.

*Case 4.*—M. P—, ætat forty-three; married, has had one child, twenty-three years ago; admitted on September 20, 1893, with advanced cancer of uterus.

*September 25.*—Under ether, disease as much as possible scraped with uterine dredger, and cavity packed with some freshly-prepared chloride of zinc paste. Vagina packed with wool soaked in saturated solution of sodium bicarbonate.

*September 30.*—Zinc paste and wool removed from uterus.

*October 7.*—Slough, comprising whole of uterus, removed *en masse*. Posterior wall of vagina also sloughed, as patient had troublesome recto-vaginal fistula. Inguinal colotomy performed on October 31, 1893.

*December 4.*—Patient discharged; no disease felt.

*Case 5.*—L. P—, ætat thirty-eight; married, fourteen children, eleven living; admitted with advanced cancer of uterus on September 16, 1893.

*September 26.*—Under ether disease scraped with dredger, and cavity packed with wool soaked in a freshly-prepared paste of chloride of zinc. Vagina packed with tampons soaked in a saturated solution of bicarbonate of soda.

*October 1.*—Zinc chloride wool removed.

*October 7.*—Slough, comprising whole of uterus, removed *en masse*.

*December 11, 1893.*—Patient discharged; much improved.

*Case 6.*—R. S—, ætat thirty-seven; married, three children, the last child born eight years ago; admitted on September 20, 1893, into the Cancer Hospital, suffering with advanced carcinoma uteri.

*September 26, 1894.*—Disease scraped away as far as possible with dredger. Uterine cavity packed with a chloride of zinc paste freshly prepared. Vagina packed with tampons soaked in saturated solutions of bicarbonate of soda.

*October 7.*—Slough, comprising entire uterus and posterior wall of vagina, removed *en masse*.

*November 20.*—Patient discharged ; wound quite healed. On making vaginal examination, the vagina is found to end in a blind pouch, about an inch and a half long ; no disease felt anywhere ; patient expresses herself as quite well.

*Case 7.*—S. B—, ætat forty-six ; married, two children, youngest twenty-one years ; admitted with advanced cancer of uterus on October 25, 1893.

*November 1, 1893.*—Under ether, as much disease as possible scraped away with uterine dredger, and cavity thus made packed with chloride of zinc wool.

*November 5.*—Zinc wool removed.

*November 8.*—Large slough removed.

*November 9.*—Uterus packed again with zinc chloride wool.

*November 13.*—Wool removed.

*November 17.*—Another large slough removed.

*November 23.*—Patient discharged ; much improved ; very little discharge.

*Case 8.*—E. M—, ætat fifty-three ; married, one child, twenty-six years ago ; admitted into the Cancer Hospital on January 12, 1894, suffering from advanced cancer of uterus.

*January 16.*—Under ether, the disease as far as possible was scraped away with the uterine dredger, and the cavity thus made was packed with zinc chloride wool saturated in freshly prepared chloride of zinc paste. The vagina was packed with tampons soaked in a saturated solution of bicarbonate of soda.

*January 20.*—Zinc wool removed ; well syringed out with iodine water through Ferguson's speculum.

*January 23.*—Large slough removed.

*February 22.*—Patient discharged ; much improved ; expresses herself as well.

*Case 9.*—M. C—, ætat fifty-four ; widow, nine children ; admitted on March 7, 1894, with advanced cancer of uterus.

*March 20, 1894.*—Under ether, disease scraped away as far as possible with dredger, and packed with chloride of zinc wool.

*March 25.*—Chloride of zinc wool removed ; well syringed with iodine water through Ferguson's speculum.

*March 27.*—Large slough, comprising cast of entire uterus, came away.

*April* 12.—Patient discharged; has no pain or discharge.

*Case 10.* — A. L——, æstat forty-two; married, ten children, one miscarriage; admitted on March 28, 1894, with advanced cancer of uterus.

*April 3, 1894.* — Under ether disease scraped away as far as possible with the uterine dredger, and cavity packed with chloride of zinc wool; vagina packed in the usual way.

*April 7.* — Chloride of zinc wool removed; vagina well syringed out with iodine water through a Ferguson's speculum.

*April 9.* — A large slough removed.

*April 21.* — Patient discharged much improved.

A  
CATALOGUE OF THE PUBLICATIONS  
OF  
BAILLIÈRE, TINDALL, & COX,  
IN  
MEDICINE, SCIENCE AND ART.

CONTENTS.

	PAGE
PERIODICAL PUBLICATIONS . . . . .	} <i>Back of Title</i>
DIRECTORIES . . . . .	
ANATOMY . . . . .	9, etc.
ART, ARTISTIC ANATOMY, ETC. . . . .	11, etc.
CHEMISTRY . . . . .	14, etc.
MEDICINE, SURGERY, AND ALLIED SCIENCES . . . . .	26, etc.
PHARMACY . . . . .	30, etc.
STUDENTS' AIDS SERIES . . . . .	36, etc.
VETERINARY MEDICINE AND SURGERY . . . . .	39, etc.
WHITE'S PHYSIOLOGICAL MANIKIN . . . . .	42



LONDON :  
20, 21, KING WILLIAM STREET, STRAND,  
[PARIS AND MADRID.]  
1894.

\* \* Baillière, Tindall, and Cox have special facilities for the disposal of authors' works in the United States and abroad; being in almost daily communication with the principal houses and agents.

## PERIODICAL PUBLICATIONS.

**The Medical Press and Circular.** Established 1838. Published every Wednesday in London, Dublin, and Edinburgh. Price 5d. ; £1 1s. per annum, post free, in advance.

**Journal of the British Dental Association.** A Monthly Review of Dental Surgery. Published on the 15th of each month. Price 6d., or 7s. per annum, post free.

**The Analyst.** The Official Organ of "The Society of Public Analysts." Monthly, price 1s. ; 10s. 6d. per annum, paid in advance.

**The Veterinary Journal, and Annals of Comparative Pathology.** Monthly, price 1s. 6d. ; 18s. per annum ; Postal Union 19s. 6d., prepaid.

**The Australasian Medical Gazette.** Monthly, 2s., or yearly post free, price 21s.

**Indian Medico-Chirurgical Review.** Monthly, 1s. 6d. ; yearly subscription, 16s., post free.

**Pathology.** A series of illustrations of Pathological Anatomy issued in monthly parts. Each part contains 4 plates in colours, with accompanying descriptive text by PROFESSORS KAST, of Breslau, and RUMPEL, of Hamburg. The English edition revised and edited by M. ARMAND RUFFER, M.D. Oxon. Twelve parts by subscription, post free, £2 8s. Single parts, 6s. each. Single plates, 1s. 6d. each.

**International Journal of Microscopy and Natural Science.** Edited by Mr. ALFRED ALLEN. Price 2s. 6d. Quarterly.

**Transactions of the Royal Academy of Medicine in Ireland.** Annual volumes, 14s.

Foreign postage extra.

---

## DIRECTORIES.

**The Official Register of the Royal College of Veterinary Surgeons;** published in accordance with the Act of Parliament. Price 2s. 6d., post free in the United Kingdom.

**Commercial Directory for Spain, her Colonies and South America,** containing 500,000 Names and Addresses of the Commercial Houses, Public Officers, Offices, etc., etc. Annual, price 25s.

## ALPHABETICAL INDEX OF AUTHORS.

	<small>PAGE</small>
ABERCROMBIE (J.) On Tetany in Young Children .....	15
ADAMS (W.) Surgical Treatment of Deformities .....	17
ALLAN (F. J.) Aids to Sanitary Science .....	31
ALLAN (J. H.) Tables of Doses .....	25
ALLEN (Alfred) Microscopical Science .....	27
ALLINGHAM (H. W.) Colotomy .....	8
ATTENDANTS. Handbook for Attendants on the Insane .....	24
BAKER (Benson) How to Feed an Infant .....	28
BALL—Nose and Pharynx .....	28
BANHAM—Veterinary Posological Tables .....	39
BANNATYNE (A.) Aids to Pathology .....	29
BEACH (Fletcher) Psychological Medicine .....	31
BERNARD (Claude) and HUETTE'S Text-book of Operative Surgery .....	33
BLACK (C.) Atlas of the Male Organs of Generation .....	10
BLACKLEY (C. H.) Hay Fever, its Causes and Treatment .....	22
BODDY (E. M.) History of Salt.....	32
Hydropathy.....	23
BORTHWICK (T.) The Demography of South Australia .....	16
BOWDICH (Mrs.) Confidential Chats with Mothers .....	15
BOWLES (R. L.) On Stertor and Apoplexy .....	11
BOYD (Stanley) Movable Atlas of the Foot, its Bones and Muscles .....	21
BRAND (A. T.) Pocket Case Book .....	14
BROCHARD (J.) Practical Guide for the Young Mother.....	28
BROWN (George) The Student's Case-book .....	14
Aids to Anatomy .....	9
Aids to Surgery .....	33
BROWNE (Lennox) The Throat and Nose, and their Diseases .....	34
Movable Atlases of the Throat and Ear .....	10
BROWNE (W. J.) The Moon, its Influence on Weather .....	27
BURKE—Tropical Diseases of the Horse .....	39
BURTON (J. E.) Translation of Ebstein's Gout .....	22
CAMERON (Chas.) Microbes in Fermentation, Putrefaction, and Disease .....	13
The Cholera Microbe and How to Meet It .....	15
CAMERON (Sir C. A.) History of the Royal College of Surgeons in Ireland .....	23
CAMPBELL (C. M.) Skin Diseases of Infancy and Early Life .....	32
CANTLIE (Jas.) Atlas of the Hand .....	10
Text-book of Naked-Eye Anatomy .....	9
CARDWELL (B.) Translation of Hygiene of Beauty .....	24
CASSELLS (J. Patterson) Deaf-mutism and the Education of the Deaf-mute .....	17
CHARCOT (J. M.) Bright's Disease of the Kidneys.....	25
CHRISTY (T.) Dictionary of Materia Medica .....	25
CHURCHILL (Fleetwood) Obstetrical and Gynaecological Nursing.....	28
CLARKE (J. Jackson) Cancer, Sarcoma and other Morbid Growths .....	14
CLARKE (Percy) Medical Laws .....	26
CLARKE (E. H.) The Building of a Brain .....	13
COFFIN (R. J. Maitland) Obstetrics .....	28
COLE (M. J.) Modern Microscopy .....	27
COOMBE (Russell) Epitome of B. P. . . . .	30
COOPER (R. T.) On Vascular Deafness .....	18
COSGRAVE (C. M.) Botany, Glossary of .....	13
COTTERELL (Ed.) The Pocket Gray, or Anatomist's Vade Mecum .....	9
COURTENAY (E.) Practice of Veterinary Medicine .....	39
COZZOLINO (V.) The Hygiene of the Ear .....	19
CROOKE (G. F.) The Pathology of Tuberculosis ..	16

	PAGE
CROSS (M. J.) <i>Modern Microscopy</i> .....	27
CRUISE (F. R.) <i>Hydropathy</i> .....	23
CULLIMORE (D. H.) <i>Consumption as a Contagious Disease</i> .....	16
— <i>The Book of Climates</i> .....	16
 DARLING (W.) <i>Anatomography, or Graphic Anatomy</i> .....	9
— <i>The Essentials of Anatomy</i> .....	9
DAWSON (W. E.) <i>Guide to the Examinations of the Apothecaries' Society</i> .....	19
DAY (W. H.) <i>Irritable Brain in Children</i> .....	13
DENNIS (Hy. J.) <i>Second-Grade Perspective Drawing</i> .....	11
— <i>Third-Grade Perspective Drawing</i> .....	12
DESSAR (L. A.) <i>Catarrhs and Colds</i> .....	14
DOLAN (T. M.) <i>Whooping Cough, its Pathology and Treatment</i> .....	35
DOWSE (T. Stretch) <i>Apoplexy</i> .....	11
— <i>Syphilis of the Brain and Spinal Cord</i> .....	34
— <i>Skin Diseases from Nervous Affections</i> .....	32
— <i>The Brain and the Nerves and Influenza</i> .....	13
DRAGENDORFF (Prof. G.) <i>Plant Analysis</i> .....	15
DRYSDALE (C. R.) <i>Nature and Treatment of Syphilis</i> .....	34
DRYSDALE (John) <i>The Protoplasmic Theory of Life</i> .....	34
DUDGEON (R. E.) <i>The Sphygmograph</i> .....	32
DUFFEY (G. F.) <i>Note-taking</i> .....	14
 EBSTEIN (Prof.) <i>The Treatment of Gout</i> .....	22
EDWARDS (F. Swinford) <i>Urinary Surgery</i> .....	35
ERSKINE (J.) <i>Hygiene of the Ear</i> .....	19
EVANS (C. W. De Lacy) <i>How to Prolong Life?</i> .....	18
— <i>Consumption: its Causes, Treatment, etc.</i> .....	16
EWART (W.) <i>Cardiac Outlines</i> .....	14
— <i>Heart-Studies, Chiefly Clinical</i> .....	22
— <i>How to Feel the Pulse</i> .....	32
— <i>Symptoms and Physical Signs</i> .....	14
 FAU (J.) <i>Artistic Anatomy of the Human Body</i> .....	11
— <i>Anatomy of the External Form of Man</i> .....	11
FIELD (G. P.) <i>Diseases of the Ear</i> .....	18
FINNY (F. M.) <i>Clinical Fever Chart</i> .....	21
FITZGERALD (H. P.) <i>Dictionary of British Plants and Flowers</i> .....	13
FLAXMAN (J.) <i>Elementary Anatomical Studies for Artists</i> .....	11
FLEMING (G.) <i>Text-book of Veterinary Obstetrics</i> .....	39
— <i>Neumann's Parasites of Domestic Animals</i> .....	39
— <i>Text-book of Veterinary Surgery</i> .....	39
— <i>Roaring in Horses</i> .....	40
— <i>Practical Horse-Shoeing</i> .....	40
— <i>Animal Plagues, their History, Nature and Treatment</i> .....	40
— <i>Contagious Diseases of Animals</i> .....	40
— <i>Tuberculosis</i> .....	40
— <i>Human and Animal Variolæ</i> .....	40
— <i>Heredity and Contagion in the Propagation of Tuberculosis</i> .....	40
FORD— <i>Ophthalmic Notes</i> .....	26
FOTHERGILL (J. Milner) <i>Chronic Bronchitis</i> .....	13
— <i>The Physiological Factor in Diagnosis</i> .....	17
— <i>Aids to Diagnosis</i> .....	18
— <i>The Physiologist in the Household</i> .....	31
— <i>Diseases of Sedentary and Advanced Life</i> .....	29

	PAGE
FOTHERGILL (J. Milner) <i>Aids to Rational Therapeutics</i> .....	34
— <i>Vaso-Renal Changes</i> .....	24
FOY (Geo.) <i>Anaesthetics: Ancient and Modern</i> .....	9
FUCHS (Dr.) <i>The Causes and Prevention of Blindness</i> .....	20
GANT (F. J.) <i>Text-book of the Science and Practice of Surgery</i> .....	33
— <i>Diseases of the Bladder, Prostate Gland, and Urethra</i> .....	13
— <i>Examinations by the Conjoint Board</i> .....	19
— <i>Students' Surgery</i> .....	33
GARMANY (J. J.) <i>Surgery on the Cadaver</i> .....	33
GARROD (A. E.) <i>Handbook of Medical Pathology</i> .....	29
GEMMELL (Wm.) <i>Dermic Memoranda</i> .....	32
GIRAUD-TEULON— <i>Anomalies of Vision</i> .....	20
GLASGOW-PATTESON (R.) <i>Skin and Hair</i> .....	32
GOODALL (E.) <i>Microscopical Examinations of the Brain</i> .....	23
GORDON (Chas. A.) <i>Our Trip to Burmah</i> .....	14
— <i>Life on the Gold Coast</i> .....	8
— <i>Lessons in Military Hygiene and Surgery</i> .....	23
— <i>A Manual of Sanitation</i> .....	23
— <i>Rabies and Hydrophobia</i> .....	23
GORDON (T. Hurd) <i>Aids to Practical Chemistry</i> .....	36
GORE (Albert A.) <i>Our Services Under the Crown</i> .....	27
— <i>Medical History of African Campaigns</i> .....	8
GOULD— <i>Illustrated Dictionary of Medicine, Biology, etc.</i> .....	18
GOW (W. J.) <i>Handbook of Medical Pathology</i> .....	29
GREEN (F. W. Edridge) <i>Memory</i> .....	27
— <i>Detection of Colour Blindness</i> .....	20
GREENWOOD (J.) <i>Laws Affecting Medical Men</i> .....	26
GREENWOOD (Major) <i>Aids to Zoology</i> .....	35
GRESSWELL (J. B. and A. G.) <i>Manual of Equine Medicine and other works</i> .....	40
GREVILLE (H. Leicester) <i>Student's Hand-book of Chemistry</i> .....	15
GRIFFITHS (A. B.) <i>Micro-Organisms</i> .....	12
GRIFFITHS (W. H.) <i>Text-book of Materia Medica and Pharmacy</i> .....	25
— <i>Notes for Pharmacopœial Preparation</i> .....	30
— <i>Posological Tables</i> .....	31
GUBB (Alfred S.) <i>Aids to Gynaecology</i> .....	22
GUILLEMARD (F. H. H.) <i>Endemic Hæmaturia</i> .....	21
HAIG-BROWN— <i>Tonsillitis</i> .....	35
HALTON (R. J.) <i>Short Lectures on Sanitary Subjects</i> .....	24
HANDBOOK for Attendants on the Insane .....	28
HARRIS (Vincent) <i>Manual for the Physiological Laboratory</i> .....	23
HARRIS (V. D.) <i>Kühne's Guide to the Demonstration of Bacteria</i> .....	12
HARTMANN (Prof.) <i>On Deaf-mutism, Translation by Dr. Cassells</i> .....	17
HAYNES (Stanley) <i>Healthy Homes</i> .....	24
HAZARD (W. P.) <i>Diseases of Live Stock</i> .....	41
HEIBERG (Jacob) <i>Atlas of Cutaneous Nerve Supply</i> .....	27
HEPPEL— <i>Analytical Conic Sections</i> .....	21
HERRINGHAM (W. P.) <i>Handbook of Medical Pathology</i> .....	29
HERSCHELL (Geo.) <i>Indigestion</i> .....	24
— <i>Heart Diagrams and Case-book</i> .....	22
HEWITT (Frederic) <i>Anaesthetics</i> .....	9
HILL (J. W.) <i>Principles and Practice of Bovine Medicine</i> .....	40
— <i>Management and Diseases of the Dog</i> .....	40
HIME (T. W.) <i>Cholera: How to Prevent and Resist It</i> .....	15
— <i>The Practical Guide to the Public Health Acts</i> .....	3 <sup>r</sup>

	PAGE
HOARE— <i>Veterinary Therapeutics</i> .....	40
HOGG (Jabez) <i>The Cure of Cataract</i> .....	20
— The Impairment of Vision from Shock .....	20
— Parasitic or Germ Theory of Disease .....	12
HOPGOOD (T. F.) <i>Notes on Surgical Treatment</i> .....	33
HORNER (Professor) <i>On Spectacles</i> .....	20
HOWAT (G. R.) <i>How to Prevent and Treat Consumption</i> .....	16
HUNTER (Ch.) <i>Manual for Dental Laboratory</i> .....	17
HUSBAND (H. Aubrey) <i>Handbook of Forensic Medicine</i> .....	21
— <i>Aids to the Analysis of Food and Drugs</i> .....	21
— <i>Handbook of the Practice of Medicine</i> .....	26
— <i>Student's Pocket Prescriber</i> .....	31
— <i>Urine</i> .....	35
HUTCHINSON (Jonathan) <i>Aids to Ophthalmic Medicine and Surgery</i> .....	20
INCE (J.) <i>Latin Grammar of Pharmacy</i> .....	30
INTERNATIONAL MEDICAL CONGRESS .....	24
JAMES (Brindley) <i>Replies to Questions in Therapeutics</i> .....	38
JAMES (M. P.) <i>Therapeutics of the Respiratory Passages</i> .....	34
— <i>Vichy and its Therapeutical Resources</i> .....	35
JENNINGS (C. E.) <i>On Transfusion of the Blood and Saline Fluids</i> .....	35
— <i>Cancer and its Complications</i> .....	14
JENNINGS (Oscar) <i>On the Cure of the Morphia Habit</i> .....	27
JESSETT (F. B.) <i>Surgical Diseases of Stomach and Intestines</i> .....	8
— <i>Cancer of the Mouth and Tongue</i> .....	14
JONES (H. Macnaughton) <i>The Diseases of Women</i> .....	22
— <i>Subjective Noises in the Head and Ears</i> .....	18
— <i>Hints for Midwives</i> .....	28
— and STEWART— <i>Handbook of Diseases of the Ear and Naso-Pharynx</i> .....	19
JONES (H.) <i>Guide to Sanitary Science Exams.</i> .....	32
JONES (T. Wharton) <i>Blood in Inflammation</i> .....	24
JUKES-BROWNE (A. J.) <i>Palaeontology (in Penning's Field Geology)</i> .....	21
KAST AND RUMPEL— <i>Illustrations of Pathological Anatomy</i> .....	29
KEETLEY (C. R. B.) <i>Guide to the Medical Profession</i> .....	26
— <i>Surgery of Knee Joint</i> .....	33
KENNEDY (Hy.) <i>An Essay on Fatty Heart</i> .....	22
KINGZETT (C. T.) <i>Nature's Hygiene</i> .....	23
KNIGHT (G. D.) <i>Movable Kidney</i> .....	25
KUHNE— <i>Demonstration of Bacteria</i> .....	12
LAMBERT (J.) <i>The Germ Theory of Disease</i> .....	40
LEASK (J. G.) <i>Questions at Medical Science Examinations</i> .....	20
LEDWICH (J.) <i>Anatomy of Inguinal and Femoral Regions</i> .....	9
LEONARD (H.) <i>The Pocket Anatomist</i> .....	9
— <i>Bandaging</i> .....	13
— <i>Hair</i> .....	22
— and CHRISTY— <i>Dictionary of Materia Medica</i> .....	25
LE SUEUR— <i>Analytical Geometry, Straight Line and Circle</i> .....	21
LETHEBY (Hy.) <i>The Sewage Question</i> .....	32
LIAUTARD (A.) <i>Animal Castration</i> .....	40
— <i>Diseases of Live Stock</i> .....	41
— <i>Lameness of Horses</i> .....	40
— <i>Operative Veterinary Surgery</i> .....	40
LITHGOW (R. A. Douglas) <i>From Generation to Generation</i> .....	22

	PAGE
LOWNE (B. T.) Aids to Physiology .....	37
LUNN (C.) The Philosophy of Voice .....	35
——— Artistic Voice in Speech and Song .....	35
LUPTON (J. I.) Horses: Sound and Unsound.....	40
MACDOUGALL (A. M.) The Maybrick Case .....	21
MACKENZIE (Sir M.) Diseases of the Throat (in Gant's Surgery) .....	33
McCAW (John) Aids to the Diagnosis and Treatment of Diseases of Children .....	15
MADDEN (T. More) Clinical Gynaecology .....	22
——— Churchill's Obstetrical Nursing .....	28
MADDICK (Distin) Stricture of the Urethra .....	33
MAGNE (Dr.) How to Preserve the Sight.....	20
MARTIN (B. R.) Diphtheria .....	18
MARTIN (J. W. & J.) Ambulance Work (Questions and Answers) .....	8
——— Nursing (Questions and Answers) .....	28
MASSE (J. N.) Text-book of Naked-Eye Anatomy .....	9
McARDLE (J. S.) Notes on Materia Medica.....	26
McBRIDE Anatomical Outlines of the Horse .....	41
McLACHLAN (John) Anatomy of Surgery .....	33
MEARS (W. P.) Schematic Anatomy .....	9
MELDON (Austin) A Treatise on Gout .....	22
MEYRICK (J. J.) Stable Management in India.....	41
MILLARD (H. B.) Bright's Disease of the Kidneys.....	25
MILLER (B. E.) Diseases of Live Stock .....	41
MOLONY (M. J.) Rupture of the Perineum .....	32
MONIN (E.) Hygiene of Beauty .....	24
MOORE (E. H.) Clinical Chart for Hospital and Private Practice.....	34
MOORE (J. W.) Text Book of Eruptive and Continued Fevers.....	21
MORDHORST (Carl) Rheumatism. Its Treatment by Electric Massage ..	32
MORGAN (John) The Dangers of Chloroform and Safety of Ether .....	8
MORRIS (Malcolm) The Skin (in Gant's Surgery) .....	33
MUCKLEY (W. J.) Student's Manual of Artistic Anatomy.....	11
——— A Handbook for Painters and Art Students on the Use of Colours .....	16
MURRAY (R. Milne) Pregnancy.....	10
MURRELL (W.) Aids to Forensic Medicine and Toxicology .....	21
MUTER (J.) Key to Organic Materia Medica .....	25
——— Manual of Analytical Chemistry .....	15
NALL (S.) Aids to Obstetrics .....	28
NAPHEYS (G. H.) Handbook of Popular Medicine .....	18
——— Modern Therapeutics .....	34
NATIONAL SOCIETY FOR PREVENTION OF BLINDNESS .....	20
NEUMANN (L. G.) Treatise on Parasites and Parasitic Diseases of Domesticated Animals .....	39
NORTON (A. T.) Text-book of Operative Surgery .....	33
——— Osteology for Students .....	23
——— Affections of the Throat and Larynx .....	35
——— Movable Atlas of the Skeleton.....	10
——— Clinical Lectures on Recent Surgery .....	33
OGSTON On Unrecognised Lesions of the Labyrinth .....	18
ORMSBY (L. H.) Deformities of the Human Body .....	17
——— Phimosis and Paraphimosis .....	30
PALFREY (J.) Atlas of the Female Organs of Generation .....	18
PALMER (J. F.) How to Bring up Children by Hand .....	28

	PAGE
PARKE (Surgeon) Climate of Africa (in Cullimore's Book of Climates) .....	16
PEDDIE (M.) Manual of Physics.....	30
PENNING (W. H.) Text-book of Field Geology .....	21
PENNING (W. H.) Engineering Geology .....	21
— Notes on Nuisances, Drains, and Dwellings .....	24
PETTENKOFER (Von) Cholera : How to Prevent and Resist It .....	15
PIERSOL (G. A.) Text-book of Normal Histology .....	23
POLITZER (Prof.) Dissections of the Human Ear .....	19
— Text-Book of Diseases of the Ear .....	19
POWER (Hy.) Movable Atlas of the Eye, and the Mechanism of Vision .....	10
— Diseases of the Eye (in Gant's Surgery) .....	33
POWER (D'Arcy) Handbook for the Physiological Laboratory .....	23
POYSER (R.) Stable Management of Troop Horses in India .....	41
PRATT (W.) A Physician's Sermon to Young Men .....	27
PROCTOR (Richd.) The Stars and the Earth .....	12
PSYCHOLOGIGAL ASSOCIATION'S Handbook for Attendants on the Insane.....	28
PURVES (L.) Aural Diseases (in Gant's Surgery) .....	33
RABAGLIATI (A.) Muscular Affections which Simulate Diseases of the Pelvic Organs in Women .....	22
— The Classification and Nomenclature of Diseases .....	18
REMSSEN (Ira) Principles of Theoretical Chemistry .....	15
RENTOUL—Reform of Medical Charities .....	26
REYNOLDS (R. S.) The Breeding and Management of Draught Horses.....	41
RICHARDS (J. M.) A Chronology of Medicine .....	26
RICHARDSON (B. W.) The Healthy Manufacture of Bread .....	21
RIVINGTON (W.) Medical Education and Organization .....	26
ROBERTSON (William) A Handbook of the Practice of Equine Medicine...	41
ROCHE (J.) Hernia and Intestinal Obstruction .....	22
ROCHET (Chas.) The Prototype of Man, for Artists .....	12
ROSE (W.) Neuralgia.....	28
ROTH (W. E.) Elements of School Hygiene.....	23
— Theatre Hygiene .....	23
ROUTH (C. H. F.) Overwork and Premature Mental Decay.....	29
— On Checks to Population .....	31
RUFFER (Armand) Illustrations of Pathological Anatomy .....	29
SARCEY (F.) Mind your Eyes.....	20
SCHOFIELD (A. T.) Examination Cards—Pathology .....	20
— Minor Surgery and Bandaging .....	33
SEMPLE (C. E. A.) Aids to Botany .....	13
— Aids to Chemistry .....	14
— Aids to Materia Medica .....	25
— Aids to Medicine .....	26
— Aids to Pharmacy .....	30
— Diseases of Children .....	15
— The Voice Musically and Medically Considered .....	35
— The Pocket Pharmacopœia .....	30
SEWILL (Hy.) Manual of Dental Surgery .....	17
— Dental Caries and the Prevention of Dental Caries .....	17
SHARMAN (J. S.) Notes on Inorganic Materia Medica.....	26
SIMON (W.) A Manual of Chemistry .....	15
SMITH (F. A. A.) Keep your Mouth Shut .....	32
SMITH (F.) Manual of Veterinary Hygiene .....	41
— Manual of Veterinary Physiology .....	41

	PAGE
SOHN (C. E.) Dictionary of the Active Principles of Plants .....	15
SPARKES (John C. L.) Artistic Anatomy .....	11
SQUIRE (P. W.) Posological Tables .....	31
STARK (A. Campbell) Practical Pharmacy .....	20, 30
STARR (M. Allen) Brain Surgery .....	33
STEPHENSON (J. B.) Medicinal Remedies.....	26
STEVENS (Geo. T.) Nervous Diseases .....	27
STEWART (W. R. H.) Practitioner's Handbook of Diseases of the Ear.....	19
Aids to Otology .....	18
STONE (G.) Translation of Politzer's Dissections of the Human Ear .....	19
STRAHAN (J.) Extra-Uterine Pregnancy .....	28
STUDENTS' AIDS SERIES .....	36
SUTTON (H. G.) Lectures on Medical Pathology .....	29
SUTTON (Bland) Dermoids.....	17
SWEETING (R. D. R.) The Sanitation of Public Institutions .....	24
SYMINGTON (J.) Anatomy of the Child .....	9
TELLOR (L. V.) Diseases of Live Stock .....	41
TEULON (G.) The Functions of Vision.....	20
THIN (George) Introduction to Practical Histology .....	23
THOROWGOOD (J. C.) Consumption ; its Treatment by the Hypophosphites .....	16
The Treatment of Bronchial Asthma .....	12
Aids to Physical Diagnosis .....	18
THUDICHUM (J. L. W.) The Physiological Chemistry of the Brain .....	13
Aids to Physiological Chemistry .....	38
Aids to Public Health.....	31
Polypus in the Nose .....	31
The Coca of Peru, and its Remedial Principles.....	16
TICHBORNE (Professor) The Mineral Waters of Europe .....	27
TIDY (Meymott) and CLARKE (Percy) Medical Laws.....	26
TIMMS (G.) Consumption ; its Nature and Treatment .....	16
Alcohol in some Clinical Aspects, a Remedy, a Poison .....	8
TOMSON—Medical Electricity .....	19
TRANSACTIONS of Royal Academy of Medicine in Ireland .....	<i>Inside cover:</i>
TUCKEY (C. Lloyd) Psycho-Therapeutics .....	24
TURNER (Dawson) Manual of Medical Electricity .....	19
TYSON (J.) The Urine, a Guide to its Practical Examination .....	35
UNDERWOOD (Arthur S.) Aids to Dental Surgery .....	17
Aids to Dental Histology .....	17
USHER (J. E.) Alcoholism .....	8
WAGSTAFFE (W. W.) Atlas of Cutaneous Nerve Supply .....	27
WALLACE (J.) Localised Peritonitis.....	29
WALSH (D.) Aids to Examinations .....	19
WALSHAM—Deformities of the Foot .....	21
WALSHAM and POWER—Surgical Pathology .....	33
WHERRY (Geo.) Clinical Notes on Nerve Disorders .....	27
WILLIAMS (J. W.) Aids to Biology .....	13
WILLIAMSON (J. M.) Ventnor and the Undercliff.....	16
WILLSON (A. Rivers) Chemical Notes for Pharmaceutical Students .....	15
WILSON (J.) A Manual of Naval Hygiene .....	24
WINDLE (B. C. A.) Proportions of the Human Body .....	12
WINSLOW (L. S. Forbes) Fasting and Feeding .....	20
Aids to Psychological Medicine .....	38
WITKOWSKI (G. J.) Movable Atlases of the Human Body .....	10

AN  
 ALPHABETICAL INDEX OF WORKS,  
 IN  
 MEDICINE, SURGERY, SCIENCE AND ART,  
 PUBLISHED BY  
 BAILLIÈRE, TINDALL, & COX,

**Abdominal Surgery.** Colotomy, Inguinal, Lumbar or Transverse ; for Cancer, or Stricture with Ulceration, of the large Intestine. By HERBERT W. ALLINGHAM, F.R.C.S., Surgeon to the Great Northern Hospital, Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum, Surgical Registrar to St. George's Hospital. With six plates and numerous illustrations. Price 6s.

**Abdominal Surgery.** The Surgical Diseases and Injuries of the Stomach and Intestines. By F. BOWREMAN JESSETT, F.R.C.S. Eng., Surgeon to the Cancer Hospital. Copiously illustrated. Price 7s. 6d.

**Africa.** A Contribution to the Medical History of our West African Campaigns. By Surgeon-Major ALBERT A. GORE, M.D., Sanitary Officer on the Staff. Price 10s. 6d.

**Africa.** Life on the Gold Coast. A Description of the Inhabitants, their Modes and Habits of Life ; Hints to Travellers and others in Western Africa. By Surgeon-General GORDON, M.D., C.B., Hon. Physician to the Queen. Price 2s. 6d.

**Alcohol**, in some Clinical Aspects : A Remedy, a Poison. By GODWIN TIMMS, M.D., M.R.C.P. Lond., Senior Physician to the North London Consumption Hospital. Price 1s.

**Alcoholism and its Treatment.** By JOHN E. USHER, M.D., F.R.G.S. Price 3s. 6d.

“ Will be found interesting and suggestive.”—*The Times*.  
 “ A very full account of the methods of treating the disease of inebriety is contained in this interesting work.”—*British Medical Journal*.

**Ambulance Work.** Questions and Answers on “ First Aid to the Injured.” By JOHN W. MARTIN, M.D., and JOHN MARTIN, F.R.C.S. Twentieth thousand. Price 1s. net.

**Anæsthetics.** The Dangers of Chloroform and the Safety and Efficiency of Ether in Surgical Operations. By JOHN MORGAN, M.D., F.R.C.S. Second thousand, price 2s.

**Anæsthetics.** Selected Methods in the Administration of Nitrous Oxide and Ether. By FREDERIC HEWITT, M.A., M.D. Cantab., Lecturer on Anæsthetics at the London Hospital. Price 2s. 6d.

**Anæsthetics:** Ancient and Modern. Their Physiological Action, Therapeutic Use, and Mode of Action. By GEORGE FOY, F.R.C.S., Surgeon to the Richmond Hospital. Price 3s. 6d. net.

**Anatomography;** or, Graphic Anatomy. A new method of grasping and committing to memory the most difficult points required of the student. By W. DARLING, M.D., F.R.C.S. Eng., Professor of Anatomy in the University of New York. Price 1s.

**Anatomy.** Aids to Anatomy. By GEORGE BROWN, M.R.C.S., Gold Medallist, Charing Cross Hospital. Price 1s. 6d. cloth, 1s. sewn.

**Anatomy.** Text-Book of Naked-Eye Anatomy. With 113 Steel Plates, designed under the direction of Professor MASSE. Text by JAS. CANTLIE, M.B., C.M. (Honours), F.R.C.S., Charing Cross Hospital. Third edition. Plain, 25s., coloured, 50s., half calf.

**Anatomy.** The Essentials of Anatomy. A Text-book for Students and a book of easy reference to the Practitioner. By W. DARLING, M.D., F.R.C.S., and A. L. RANNEY, M.D. 12s. 6d.

**Anatomy.** **The Pocket Gray**, or Anatomist's Vade-Mecum. Compiled from the works of Gray, Ellis, Holden, and Leonard. By E. COTTERELL, F.R.C.S. Eng., late Demonstrator of Anatomy, University College, London. Fourth edition, 3s. 6d.

"A marvellous amount of information condensed into a remarkably small space." — *Med. Press.*

**Anatomy.** **The Pocket Anatomist.** By H. LEONARD, M.D. Enlarged Edition, illustrated. Price 3s. 6d.

**Anatomy.** **Schematic Anatomy;** or Diagrams, Tables and Notes treating of the Association and Systematic arrangement of Structural Details of Human Anatomy. By WILLIAM P. MEARS, M.B., Professor and Examiner in Anatomy at the University of Durham. Profusely illustrated. Price 7s. 6d.

**Anatomy.** Anatomy of the Child. With 14 coloured plates and 33 woodcuts. By JOHNSON SYMINGTON, M.D., F.R.S.E., F.R.C.S.E., Lecturer on Anatomy, Edinburgh. Price 42s.

**Anatomy of the Inguinal and Femoral Regions in Relation to Hernia.** By E. LEDWICH, Lecturer on Anatomy in the Ledwich School of Medicine, Dublin. Price 3s.

**Anatomy. Human Anatomy and Physiology**, illustrated by a series of Mcvable Atlases of the Human Body, showing the relative positions of the several parts, by means of Superposed Coloured Plates, from the designs of Professor G. J. WITKOWSKI, M.D. Each part complete in itself. Price 7s. 6d. net.

Part I.—Neck and Trunk. With Text Descriptive and Explanatory of the physiology and functions of the several parts. By ROBERT HUNTER SEMPLE, M.D., F.R.C.P. Lond. Price 7s. 6d.

The same enlarged to Life Size. Price £2 2s.

Part II.—Throat and Tongue, showing the Mechanism of Voice, Speech, and Taste. Text by LENNOX BROWNE, F.R.C.S. Ed. Price 7s. 6d.

Part III.—The Female Organs of Generation and Reproduction. Text by JAMES PALFREY, M.D., M.R.C.P. Lond., late Senior Obstetric Physician, London Hospital. Price 7s. 6d.

Part IV.—The Eye and the Apparatus of Vision. Text by HENRY POWER, F.R.C.S., Senior Ophthalmic Surgeon to St. Bartholomew's Hospital. Price 7s. 6d.

Part V.—The Ear and Teeth. The Mechanism of Hearing, and of Mastication. Text of the Ear by LENNOX BROWNE, F.R.C.S.E. The Teeth by H. SEWILL, M.R.C.S. Price 7s. 6d.

Part VI.—The Brain and Skull. (Cerebrum, Cerebellum, and Medulla Oblongata.) Text by T. STRETCH DOWSE, M.D., F.R.C.P. Ed. Price 7s. 6d.

Part VII.—The Male Organs of Generation. Text by D. CAMPBELL BLACK, M.D., Physician to the Glasgow Royal Infirmary. Price 7s. 6d.

Part VIII.—The Skeleton and its Articulations, showing the Bones and Ligaments of the Human Body and Limbs. Text by A. T. NORTON, F.R.C.S. Price 7s. 6d.

Part IX.—The Hand; its Bones, Muscles and Attachments. Text by JAS. CANTLIE, M.B., F.R.C.S. Price 7s. 6d.

Part X.—The Foot; its Bones, Muscles and Attachments. Text by STANLEY BOYD, M.B., B.S. Lond., F.R.C.S., Assistant Surgeon, Charing Cross Hospital. Price 7s. 6d.

Part XI.—Progress of Gestation. A Synopsis of Practical Obstetrics. Text by R. MILNE MURRAY, F.R.C.P. Edin., M.B. Edin. Price 7s. 6d.

*The Set of Eleven Parts, complete in cloth-covered Box, with lock and key, £4 net.*

\* \* No such simple, reliable, and comprehensive method of learning the several parts, positions, and functions of the body has hitherto been attempted; the entire Series being unique, will be most valuable to the Teacher, the Student, and to all who wish to become acquainted with the anatomy and physiology of the human economy.

**Apoplexy.** On Stertor, Apoplexy, and the Management of the Apoplectic State. By ROBERT L. BOWLES, M.D., F.R.C.P. Lond., Consulting Physician to the Victoria Hospital, and to the St. Andrew's Convalescent Hospital, Folkestone. With 13 Illustrations. Price 4s. 6d.

"The information is both practical and useful, and based on extensive clinical and experimental investigation. The principles advocated by the author deserve to be more widely known and acted on than they are at present."—*British Medical Journal*.

"The author has produced a book which is at present the only authority on the subject."—*Medical Press*.

**Apoplexy.** Diagnosis and Treatment of Apoplexy. By T. STRETCH DOWSE, M.D., F.R.C.P.E., formerly Medical Superintendent, Central London Sick Asylum. Price 1s.

**Army Hygiene.** Lessons in Military Hygiene and Surgery. By Surgeon-General GORDON, M.D., C.B., Hon. Physician to H.M. the Queen. Illustrated. Price 10s. 6d.

**Artistic Anatomy.** Anatomy of the External Forms of Man, for the use of Artists, Sculptors, etc. By Dr. J. FAU. Used at the Government School of Art, South Kensington. Twenty-nine plates. Folio. New edition. 30s. coloured, 15s. plain.

**Artistic Anatomy.** Elementary Anatomical Studies of the Bones and Muscles, for Students and Schools, from the drawings of J. FLAXMAN, R.A. Lately used as a Text-book in the Art Schools at South Kensington. 20 plates, with Text, price 2s.

**Artistic Anatomy.** The Student's Manual of Artistic Anatomy. With 25 etched plates of the bones and surface muscles of the human figure. By W. J. MUCKLEY. Used at the Government School, South Kensington. Second edition. Price 5s. 6d.

**Artistic Anatomy.** Elementary Artistic Anatomy of the Human Body. From the French of Dr. FAU. With English Text. Used at the Government School of Art, South Kensington. Price 5s.

**Artistic Anatomy.** Description of the Bones and Muscles that influence the External Form of Man. With 43 plates. By JOHN C. L. SPARKES, Principal of the National Art Training School, South Kensington. Adopted as a text-book at the Government Art Schools. Price 7s. 6d.

**Artistic Drawing.** Second Grade Perspective (Theory and Practice), containing 30 block illustrations, 21 plates, and many examination exercises. Used at the Government Science and Art Schools. By H. J. DENNIS, Art Master, Lambeth School of Art, Dulwich College, etc. Price 2s. 6d.

**Artistic Drawing.** Third Grade Perspective, for the use of Art Students. By H. J. DENNIS. Used at the Science and Art Schools. In two parts, 7s. 6d. each. Part 1, Angular and Oblique Perspective. Part 2, Shadows and Reflections; or, half-bound leather in one vol., price 15s.

**Artistic Drawing.** The Prototype of Man, giving the natural laws of Human proportion in both sexes. A manual for artists and professors of drawing. By CHAS. ROCHET, of Paris. Price 1s.

**Artistic Drawing.** A Manual of the Proportions of the Human Body for Artists. By BERTRAM C. A. WINDLE, M.A., M.D., D.Sc., Queen's Professor of Anatomy in the Mason College, Professor of Anatomy to the Royal College of Artists, and Lecturer in the Municipal School of Birmingham. Price 2s.

**Artists' Colours.** Their Preparation, Uses, etc. (See Colours.)

**Asthma.** On Asthma and Chronic Bronchitis — their Causes, Pathology and Treatment. Lettsomian Lectures. By J. C. THOROWGOOD, M.D., F.R.C.P. London, Senior Physician to the City of London Hospital for Diseases of the Chest. Fourth edition. Price 4s.

**Astronomy.** The Stars and the Earth; or, Thoughts on Time, Space, and Eternity. With Notes by R. A. PROCTOR, B.A. Fourteenth thousand. Price 1s.

**Ataxia.** Nervous Affections associated with the Initial or Curative Stage of Locomotor Ataxy. By T. STRETCH DOWSE, M.D., F.R.C.P.E. Second edition. Price 2s.

**Aural Diseases.** (See Ear.)

**Bacteriology.** Researches in Micro-Organisms, including recent Experiments in the Destruction of Microbes in Infectious Diseases, etc. By A. B. GRIFFITHS, Ph.D., F.C.S., F.R.S.E. With 52 Illustrations. Price 6s.

"An enormous amount of material, the author has taken great trouble to collect a large number of the references bearing on the points he mentions." — *Lancet*.

"The work . . . may be recommended to those who wish to have in a convenient form a very large number of facts and references relating to bacteria." — *British Medical Journal*.

**Bacteriology.** A Parasitic or Germ Theory of Disease: the Skin, Eye, and other affections. By JABEZ HOGG, M.R.C.S., Consulting Surgeon to the Royal Westminster Ophthalmic Hospital. Second edition. Price 2s. 6d.

**Bacteriology.** Guide to the Demonstration of Bacteria in the Tissues. By Dr. H. KÜHNE, of Wiesbaden. Translated and Edited by VINCENT DORMER HARRIS, M.D. Lond., F.R.C.P., Demonstrator of Physiology at St. Bartholomew's Hospital. Price 2s. 6d.

**Bacteriology.** Microbes in Fermentation, Putrefaction, and Disease. By CHARLES CAMERON, M.D., LL.D., M.P. Price 1s.

Professor Tyndall, F.R.S., writes: "Matthew Arnold himself could not find fault with its lucidity, while as regards knowledge and grasp of the subject I have rarely met its equal."

**Bandaging.** A Manual for Self-instruction. By C. H. LEONARD, A.M., M.D., Professor of Diseases of Women in the State College, Michigan. With 139 illustrations. Price 3s. 6d.

**Biology.** Aids to Biology. Specially prepared to meet the requirements of students reading for the first examination of the Conjoint Board. By JOSEPH W. WILLIAMS. Price 2s. sewn, and 2s. 6d. cloth.

**Bladder.** On Diseases of the Bladder, Prostate Gland, and Urethra. By F. J. GANT, F.R.C.S., Senior Surgeon to the Royal Free Hospital. Fifth edition. Price 12s. 6d.

**Botany.** A Dictionary of British Plants and Flowers; their names, pronunciation, origin, etc. By H. P. FITZGERALD. Price 2s. 6d.

**Botany.** Aids to Botany. Outlines of the Elementary Facts, including a Description of some of the most important Natural Orders. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond. Price 2s. 6d. cloth; 2s. paper wrapper.

**Botany.** The Student's Botany. Encyclopædic Glossary. By E. MACDOWEL COSGRAVE, M.D., Lecturer on Botany, Carmichael College. Price 2s. 6d.

**Brain.** The Building of a Brain. By E. H. CLARKE, M.D. (author of "Sex in Education"). Price 5s.

"Carefully and elegantly written, and full of sound physiology."—*Lancet*.

**Brain.** On Irritable Brain in Children. By W. H. DAY, M.D., M.R.C.P. Lond., Physician to the Samaritan Hospital for Women and Children. Price 1s. 6d.

**Brain.** The Physiological and Chemical Constitution of the Brain, based throughout on original researches. By J. L. W. THUDICHUM, M.D., F.R.C.P. Lond. Price 10s. 6d.

**Brain.** On Brain and Nerve Exhaustion (Neurasthenia), and on the Exhaustions of Influenza. By the same Author. Price

**Brain:** examination of. (See Histology.)

**Brain:** Surgery of. (See Surgery.)

**Bronchitis.** Chronic Bronchitis: its Forms and Treatment. By J. MILNER FOTHERGILL, M.D. Ed., M.R.C.P. Lond. Second edition. Price 4s. 6d.

"It bristles with valuable hints for treatment."—*British Medical Journal*.

"The pages teem with suggestions of value."—*Philadelphia Medical Times*.

**Burmah.** Our Trip to Burmah, with Notes on the Ethnology, Geography, Botany, Habits and Customs of that Country, by Surgeon-General GORDON, C.B., M.D., Physician to the Queen. Illustrated with numerous Photographs, Maps, Coloured Plates, and Sketches in gold by native Artists. Price 21s.

"We lay down this book, impressed with its many beauties, its amusing sketches and anecdotes, and its useful and instructive information."—*The Times*.

**Cancer and its Complications.** Its Local Origin, Preventive and Curative Treatment. By C. E. JENNINGS, F.R.C.S. Eng., M.S., M.B. Second edition. Price 3s. 6d. net.

**Cancer of the Mouth, Tongue and œsophagus.** By F. BOWREMAN JESSETT, F.R.C.S. Eng., Surgeon to the Cancer Hospital. 6s.

**Cancer, Sarcoma, and other Morbid Growths** considered in relation to the Sporozoa. By J. JACKSON CLARKE, M.B. Lond., F.R.C.S., Curator of the Museum, and Pathologist at St. Mary's Hospital. Illustrated. Price 3s. 6d. net.

**Case Books.** A Pocket Case-book for Practitioners and Students. With diagrams, charts, and suggestions for note-taking. By ALEX. THEODORE BRAND, M.D., C.M. Bound in limp leather cover. Price 4s. Loose sheets per doz. 1s., 50 3s. 6d., 100 6s.

**Case Taking.** Cardiac Outlines for Clinical Clerks and Practitioners; and First Principles in the Physical Examination of the Heart for the Beginner. By W. EWART, M.D., F.R.C.P. Lond., Physician to St. George's Hospital, London. With fifty illustrations. Price 5s. 6d.

\* \* \* A supply of thoracic and cardiac outlines (4½ by 3½ inches), on gummed paper, is included in each copy.

**Case Taking.** Symptoms and Physical Signs, a formulary for medical note-taking, with examples. By the same Author. Price 2s.

**Case Books.** Student's Case-book. For recording cases as seen, with full instructions for methodizing clinical study. By GEORGE BROWN, M.R.C.S., Gold Medallist, Charing Cross Hospital. Fourth thousand, cloth. Price 1s. net.

**Case-book.** Suggestions for a plan of taking notes in medical cases. By GEO. F. DUFFEY, M.D. Dublin. Price 6d.

**Catarrhs.** Home Treatment for Catarrhs and Colds. By LEONARD A. DESSAR, M.D. Illustrated. Price 5s.

**Chemistry.** Aids to Chemistry. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond.

Part I.—Inorganic. The Non-metallic Elements. Price 2s. 6d. cloth; 2s. paper wrapper.

Part II.—Inorganic. The Metals. Price 2s. 6d. cloth; 2s. paper.

Part III.—Organic. Cloth, 2s. 6d.; paper, 2s.

Part IV.—Tablets of Chemical Analysis. Price 1s. 6d. and 1s.

"Students preparing for Matriculation at the London University, and other Examinations will find it simply invaluable."—*Students' Journal*.

**Chemistry.** A Manual of Chemistry ; a complete guide to Lectures and Laboratory work for beginners in Chemistry, and a text-book for students in Medicine and Pharmacy. By W. SIMON, Ph.D., M.D. Coloured plates, 56 Chemical reactions. 15s.

**Chemistry.** Dictionary of the Active Principles of Plants : Alkaloids, Bitter Principles, Glucosides, with tabular summary and classification of Reactions. By CHARLES E. SOHN, F.I.C., F.C.S. An entirely original book. Price 10s. 6d.

**Chemistry.** Plant Analysis, Quantitative and Qualitative. By G. DRAGENDORFF, Professor of Chemistry and Pharmacy in the University of Dorpat. Price 7s. 6d.

**Chemistry.** The Principles of Theoretical Chemistry, with special reference to the Constitution of Chemical Compounds. By IRA REMSEN, M.D., Ph.D., Professor of Chemistry in the John Hopkins University. 4th edit., enlarged and revised. 7s. 6d.

**Chemistry.** The Student's Hand-book, with Tables and Chemical Calculations. By H. LEICESTER GREVILLE, F.I.C., F.C.S. Second edition. Price 6s.

**Chemistry.** Chemical Notes for Pharmaceutical Students. By A. RIVERS WILLSON. Second edition. Price 3s. 6d.

"Of exceeding value to students going up for examination."—*Pharmaceutical Journal*.

**Chemistry.** A Short Manual of Analytical Chemistry for Laboratory Use. By JOHN MUTER, Ph.D., M.A., F.C.S. Second edition. Price 6s. 6d.

**Children.** The Diseases of Children : their History, Causes and Treatment. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond. Price 6s.

**Children.** Aids to the Diagnosis and Treatment of Diseases of Children. By JOHN McCAW, M.D., L.R.C.P. Price 3s. 6d. cloth ; 3s. paper cover.

**Children.** Confidential Chats with Mothers on the healthy rearing of Children. By Mrs. BOWDICH. Price 2s.

**Children.** On Tetany in Young Children. By J. ABERCROMBIE, M.D., M.R.C.P. Lond. Price 2s.

**Cholera.** How to Prevent and Resist it. By Professor von PETTENKOFER and T. WHITESIDE HIME, A.B., M.B. Second edition. Illustrated. Price 3s. 6d.

**Cholera.** The Cholera Microbe and How to Meet It. Read at the Congress of the British Medical Association. By CHARLES CAMERON, M.D., LL.D., M.P. Price 1s.

**Climatology.** Ventnor and the Undercliff. By J. M. WILLIAMSON, M.D., M.B. Ed., Hon. Surgeon to the National Hospital for Consumption. Second edition, price 1s.

**Climatology.** The Demography of South Australia. By THOS. BORTHWICK, M.D. Ed., Medical Officer of Health for South Australian District. With three plates. Price 2s. 6d.

**Climatology.** The Book of Climates in all Lands. A Handbook for Travellers, Invalids, and others in search of Health and Recreation. By D. H. CULLIMORE, M.D., M.R.C.P. Lond. With a chapter on the Climate of Africa by Surgeon PARKE, D.C.L. Second edition, price 4s. 6d.

"A very useful book."—*The Graphic*.

"There is much which entitles it to a large circulation."—*Westminster Review*.

"A work of supreme interest to the traveller in search of health."—*Freeman's Journal*.

**Coca.** The Coca of Peru, its Remedial Principles, and Healing Powers. By J. L. W. THUDICHUM, M.D., F.R.C.P. Price 1s.

**Colours.** A Hand-book for Painters and Art Students, on the use of Colours, Vehicles, etc. By W. J. MUCKLEY. Fourth edition enlarged. Price 4s.

**Consumption.** Consumption as a Contagious Disease ; the Merits of the Air of Mountains and Plains. By D. H. CULLIMORE, M.D., M.R.C.P. Lond., formerly H.M. Indian Army. Price 5s.

**Consumption.** Consumption and its Treatment by the Hypophosphites. By JOHN C. THOROWGOOD, M.D., F.R.C.P. Lond., Physician to the City of London Hospital for Diseases of the Chest, Victoria Park. Third edition, price 2s. 6d.

**Consumption.** A Re-investigation of its Causes. By C. W. DE LACY EVANS, M.R.C.S. Eng. Price 2s. 6d.

**Consumption.** How to Prevent and Treat Consumption. By G. RUTLAND HOWAT, B.A. Lond. Price 2s. 6d.

**Consumption.** An Essay on Consumption : Its True Nature and Successful Treatment. By GODWIN W. TIMMS, M.D. Lond. Second edition, revised and enlarged, price 10s. 6d.

**Consumption.** Tuberculosis from a Sanitary and Pathological Point of View. By G. FLEMING, C.B., F.R.C.V.S., President of the Royal College of Veterinary Surgeons. Price 1s.

**Consumption.** The Pathology of Tuberculosis (Pulmonary Tuberculosis and Tubercular Phthisis). Post Graduate Lectures delivered at Queen's Hospital, Birmingham, 1891. By GEO. F. CROOKE, M.D., Physician and Pathologist to Queen's Hospital, and Lecturer on Pathology in Queen's College. Price 2s. 6d.

**Deaf-mutism.** On the Education of Deaf-mutes by Lip-Reading and Articulation. By Professor HARTMANN. Translated by Dr. PATTERSON CASSELLS. Price 7s. 6d.

"The instruction of deaf-mutes is here rendered easy."—*Athenaeum.*  
"We can honestly recommend it to anyone seeking for knowledge."—*The Lancet.*

**Deafness.** (See Ear.)

**Deformities.** The Nature and Treatment of Deformities of the Human Body. By LAMBERT H. ORMSBY, M.B. Dub., Surgeon to the Meath Hospital and Dublin Infirmary. Price 5s.

**Deformities.** The Surgical Treatment of Deformities. By W.M. ADAMS, F.R.C.S. Price 2s. 6d.

**Deformities.** Three Lectures on the Growth Rates of the Body, and Especially of the Limbs, in their Relation to the Processes of Rectification of Deformity. By WALTER PYE, F.R.C.S. Eng. Price 1s.

**Dental Surgery.** A Manual of Dental Surgery: Including Special Anatomy and Pathology. For Students and Practitioners. By HENRY SEWILL, M.R.C.S., L.D.S. Eng. Third edition, with upwards of 200 illustrations, chiefly original. Price 10s. 6d.

**Dental.** Dental Caries and the Prevention of Dental Caries. By HENRY SEWILL, M.R.C.S., L.D.S. Second edition. Price 2s. 6d.

**Dental.** Aids to Dental Surgery. By ARTHUR S. UNDERWOOD, M.R.C.S., L.D.S. Eng. Price 2s. 6d. cloth; 2s. paper.

**Dental.** Aids to Dental Histology. By the same Author. Price 2s. 6d. cloth; 2s. paper wrapper.

**Dental.** Manual for the Dental Laboratory. A Practical Guide to its Management, Economy, and Methods of Manipulation. By CHARLES HUNTER, Author of "A Treatise on Mechanical Dentistry." Price 5s.

**Dermatology.** (See Skin.)

**Dermoids.** A Course of Lectures delivered at the Royal College of Surgeons, 1889, on "Evolution in Pathology." By J. BLAND SUTTON, F.R.C.S., Hunterian Professor. Illustrated. Price 3s.

"We commend the study of this book to all interested in the elucidation of pathological problems."—*The Lancet.*

**Diagnosis.** The Physiological Factor in Diagnosis. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. Second ed. Price 7s. 6d.

"An exceedingly clever and well-written book, put together in a very plain, practical, and taking way."—*Edinburgh Medical Journal.*

**Diagnosis, Aids to.** Three Parts. Price 1s. and 1s. 6d. each.  
 Part I.—Semeiological. By J. MILNER FOTHERGILL, M.D.  
 Part II.—Physical. By J. C. THOROWGOOD, M.D., F.R.C.P.  
 Part III.—What to Ask the Patient. By J. MILNER FOTHERGILL, M.D.

The three parts in 1 vol. Edited by Dr. THOROWGOOD.  
 Price 3s. 6d. cloth.

"A mine of valuable information."—*Edinburgh Medical Journal*.

**Dictionary.** Illustrated Dictionary of Medicine, Biology, and Allied Sciences, including Pronunciation, Derivation. By GEORGE M. GOULD, A.M., M.D. Half morocco. Price 40s. net.

**Diphtheria.** A Practical Treatise on Diphtheria and its successful Treatment. By B. R. MARTIN, M.B. Dub. Price 1s. 6d.

**Diseases.** The Classification and Nomenclature of Diseases. By A. RABAGLIATI, M.A., M.D., Senior Surgeon Bradford Infirmary, Surgeon to the Children's Hospital. Price 2s. 6d.

**Domestic Medicine.** Handbook of Popular Medicine for family instruction, colonists and others out of reach of medical aid. By G. H. NAPHEYS, A.M., M.D. With movable plate and 100 illustrations. Price 7s. 6d.

**Diet.** How to Prolong Life. Showing the Diet and Agents best adapted for a lengthened prolongation of existence. By C. W. DE LACY EVANS, M.R.C.S. Second edition. Price 5s.

(See also Food.)

**Ear.** Diseases of the Ear. By GEORGE P. FIELD, M.R.C.S., Aural Surgeon to St. Mary's Hospital, and Lecturer on Aural Surgery. Fifth edition, enlarged, with 23 coloured plates and numerous woodcuts. Price 12s. 6d.

**Ear.** The Pathology and Treatment of Suppurative Diseases of the Ear. By the same author. Price 2s. 6d.

**Ear.** On Unrecognised Lesions of the Labyrinth. The Cavendish Lecture, 1890. By ALEX OGSTON, M.D., C.M., Regius Professor of Surgery, University of Aberdeen. Illustrated. Price 1s.

**Ear.** On Vascular Deafness. By ROBERT J. COOPER, M.D., Trinity College, Dublin. Price 3s. 6d.

**Ear.** Aids to Otology. By W. R. H. STEWART, F.R.C.S.E. Price 2s. 6d. cloth.

**Ear.** Subjective Noises in the Head and Ears. Their Etiology, Diagnosis and Treatment. By H. MACNAUGHTON JONES, M.D., F.R.C.S. I. and E., Fellow of the Medical, Obstetrical, Gynaecological and Ophthalmological Societies of London. Profusely illustrated, price 4s. 6d.

**Ear.** The Hygiene of the Ear. By CAVALIERE VINCENZO COZZOLINO, Professor in the Royal University of Naples, and Director of the Hospital Clinic for Diseases of the Ear, Nose, and Throat. Translated from the fifth Italian edition by James Erskine, M.A., M.B. Price 1s.

**Ear.** Practitioner's Hand Book of Diseases of the Ear and Naso-Pharynx. By Dr. H. MACNAUGHTON JONES and Mr. W. R. H. STEWART, F.R.C.S.E. Fifth edition, with plates and numerous woodcuts. Price 10s. 6d.

**Ear.** Text-book of Diseases of the Ear and Adjacent Organs. By PROFESSOR POLITZER, of Vienna. Translated from the third German edition by OSCAR DODD, M.D., and Edited by SIR WM. DALBY, B.A., M.B., F.R.C.S. Profusely illustrated. Price 21s.

**Ear.** The Anatomical and Histological Dissection of the Human Ear, in its Normal and Diseased Conditions. By Professor POLITZER, of Vienna. Translated at the author's request by GEORGE STONE, F.R.C.P. Ed. Profusely illustrated. 10s. 6d.

**Electricity.** A Manual of Practical Medical Electricity. By DAWSON TURNER, B.A., M.D., F.R.C.P. Ed., M.R.C.P. Lond. Profusely illustrated. Price 7s. 6d.

"Valuable alike to students and practitioners."—*Practitioner*.

"We cordially recommend this text-book, both to the student and the practitioner, as a thoroughly reliable and practical manual of the subject which it professes to teach."—*Medical Press and Circular*.

"Dr. Turner gives us an admirable and complete exposition of electricity, as applied to the practice of medicine and surgery, which is well up to date, and conveyed in a clear and lucid manner, such as will readily attract the attention of practitioners and students, for whom the book is intended."—*Medical Reprints*.

**Electricity.** Electricity in General Practice. By W. BOLTON TOMSON, M.D. Price 2s. 6d.

**Etiquette.** A few Rules of Medical Etiquette. By a L.R.C.P. Lond. Price 1s.

**Examinations.** Aids to Examinations. By D. WALSH, M.B., C.M., L.R.C.P. Being Questions and Answers on Materia Medica, Medicine, Midwifery, Pathology, and Forensic Medicine. New edition. Price 2s. 6d. cloth ; 2s. paper wrapper.

**Examinations.** A Guide to the Examinations of the conjoint Board in England and for the Fellowship of the College of Surgeons, with Examination Papers. By F. J. GANT, F.R.C.S. Sixth edition, revised and enlarged. Price 5s. net.

**Examinations.** A Guide to the Examinations of the Apothecaries' Society of London with Questions, Tables on Materia Medica, etc. By W. E. DAWSON, L.S.A. Second edition. Price 2s. 6d.

"May be studied with great advantage by a student, shortly before presenting himself for examination."—*British Medical Journal*.

**Examinations.** Examination Questions on the Medical Sciences, including the Army, Navy and University Examinations. Selected and arranged by JAMES GREIG LEASK, M.B. Abdn. Second edition. Price 2s. 6d.

"Dr. Leask's questions are particularly suitable for pure examination study. Students should test themselves thereby."—*British Medical Journal*.

**Examinations.** Practical Pharmacy for Medical Students; specially adapted for the Examination in Practical Pharmacy of the Conjoint Board. By A. CAMPBELL STARK, Demonstrator on Materia Medica and Pharmacy at St. George's Hospital. Price 3s. 6d., or interleaved for note-taking, 4s. 6d.

**Examination Cards:** Questions and Answers. By A. T. SCHOFIELD, M.D. Pathology, 2 sets, 9d. each, net. Minor Surgery, Bandaging, etc., 9d., net.

**Eye.** Aids to Ophthalmic Medicine and Surgery. By J. HUTCHINSON, jun., F.R.C.S., Ophthalmic Surgeon to the Great Northern Hospital. Cloth, 2s. 6d.

**Eye.** Ophthalmic Notes. A Pocket Guide to the Nature and Treatment of Common Affections of the Eye. By A. VERNON FORD, M.R.C.S. Eng., L.K.Q.C.P. Ire. Price 2s. 6d.

**Eye.** The Detection of Colour Blindness, from a practical point of view. By F. W. EDRIDGE-GREEN, M.D., F.G.S., Author of "Memory," etc., etc. Price 1s.

**Eye.** The Cure of Cataract and other Eye Affections. By JABEZ HOGG, M.R.C.S., Consulting Surgeon to the Royal Westminster Ophthalmic Hospital. Third edition. Price 2s. 6d.

**Eye.** On Impairment or Loss of Vision from Spinal Concussion or Shock. By the same Author. Price 1s. 6d.

**Eye.** The Functions of Vision and its Anomalies. By Dr. GIRAUD TEULON. Translated by LLOYD OWEN, F.R.C.S.I., Surgeon to the Midland Eye Hospital, Ophthalmic Surgeon to the Hospital for Sick Children, Birmingham. Price 5s.

**Eye.** Movable Atlas of the Eye and the Mechanism of Vision. By Prof. G. J. WITKOWSKI. Price 7s. 6d. (See Anatomy.)  
(The following four works have been translated for the National Society for the Prevention and Cure of Blindness.)

Mind your Eyes. By F. SARCEY. Price 2s. 6d.

The Causes and Prevention of Blindness. By Professor FUCHS, University of Liège. Price 7s. 6d.

How to Preserve the Sight. By Dr. MAGNÉ. Price 6d.

On Spectacles, their History and Uses. By Prof. HORNER. Price 6d.

**Fasting and Feeding,** Psychologically considered. By L. S. FORBES WINSLOW, M.B. Cantab., D.C.L. Oxon. Price 2s.

**Fever.** On the Endemic Hæmaturia of Hot Climates, caused by the presence of Bilharzia Hæmaturia. By F. H. H. GUILLEMARD, M.A., M.D., F.R.G.S. Price 2s.

**Fever.** Text-Book of the Eruptive and Continued Fevers. By JOHN WILLIAM MOORE, B.A., M.D., M. Ch. Univ. Dub., F.R.C.P.I., Joint Professor of Practice of Medicine in the Schools of Surgery of the Royal College of Surgeons in Ireland, Physician to the Meath Hospital, Dublin, Consulting Physician to Cork Street Fever Hospital, Dublin, ex-Scholar and Diplomate in State Medicine of Trinity College, Dublin. Price 15s.

**Fever Charts.** Daily Clinical Fever Charts, to record the progress of a case of fever. By F. MAGEE FINNY, M.D. Price 5s.

**Food.** Aids to the Analysis of Food and Drugs. By H. AUBREY HUSBAND, M.B., F.R.C.S., Lecturer on Public Health in the Edinburgh Medical School. Price 1s. 6d. cloth; 1s. paper.

**Food.** The Healthy Manufacture of Bread. By B. W. RICHARDSON, M.D., F.R.S. Price 6d. paper cover; cloth, 1s., with Vignette.

**Foot.** Movable Atlas of the Foot; its Bones, Muscles, etc. By Prof. WITKOWSKI. Price 7s. 6d. (See Anatomy.)

**Foot.** Deformities of the Foot. By W. J. WALSHAM, M.B., F.R.C.S. Eng., Surgeon to St. Thomas's Hospital. Profusely illustrated. [In the Press.]

**Forensic Medicine.** The Maybrick Case. A Treatise by A. M. MACDOUGALL, B.A., LL.D. Price 10s. 6d.

**Forensic Medicine.** The Student's Handbook of Forensic Medicine and Public Health. By H. AUBREY HUSBAND, M.B., F.R.C.S.E. Sixth edition. Price 10s. 6d.

**Forensic Medicine.** Aids to Forensic Medicine and Toxicology. By WM. MURRELL, M.D., F.R.C.P. Lond., Physician to, and Lecturer on *Materia Medica*, Westminster Hospital. Sixth thousand. Price 2s. 6d.

**Geology.** Field Geology, with a Section on Palæontology. By W. HY. PENNING, F.G.S., of H.M. Geological Survey, and A. J. JUKES-BROWNE, B.A., F.G.S. With woodcuts and coloured map. Second edition, revised and enlarged. Price 7s. 6d. "Others have taught us the principles of the science, but Mr. Penning, as an accomplished field-geologist, introduces us to the practice." — *The Academy*.

**Geology.** Engineering Geology. By the same Author. Illustrated with coloured maps and woodcuts. Price 3s. 6d.

"A full and lucid description of surveying and mapping, the diagnosis of the various minerals met with, the value of sites, rocks, etc." — *Popular Science Review*.

**Geometry.** Aids to Analytical Geometry. I. The Straight Line and Circle. By A. LE SUEUR, B.A. Cantab. Second edition, 2s.

II. The Conic Sections, with solutions of questions set at the London University and other Examinations by GEORGE HEPPEL, M.A. Cantab. Price 2s.

**Gout.** A Treatise on Gout. By AUSTIN MELDON, M.K.Q.C.P., F.R.C.S.I., Senior Surgeon Jervis Street Hospital, Consulting Physician Dublin General Infirmary. Tenth edition. Price 2s. 6d.

**Gout.** The Nature and Treatment of Gout. By Professor EBSTEIN of Gottingen University. Translated by J. E. BURTON, L.R.C.P. Lond. Price 3s. 6d.

**Gynæcology.** The Diseases of Women and their Treatment. By H. MACNAUGHTON JONES, M.D., F.R.C.S.I., F.R.C.S.E., Examiner in Midwifery, Royal College of Surgeons, Ireland. Sixth edition. Illustrated, price 12s. 6d.

"A storehouse of information."—*The Lancet*.

"The work of a mature and experienced authority."—*British Medical Journal*.

"Of exceptional merit drawn from a field of wide personal experience."—*Medical Press*.

**Gynæcology.** Clinical Gynæcology: being a Handbook of Diseases peculiar to Women. By THOS. MORE MADDEN, M.D., F.R.C.S. Ed., Obstetric Physician and Gynæcologist, Mater Misericordiæ Hospital, Dublin. Price 12s. 6d.

**Gynæcology.** Aids to Gynæcology. By ALFRED S. GUBB, M.D. Paris, M.R.C.S., L.R.C.P., D.P.H., Obstetric Assistant and Gold Medallist Westminster Hospital. Second edition, enlarged. Cloth, 2s. 6d., and 2s. sewn.

**Gynæcology.** Muscular Affections which Simulate Diseases of the Pelvic Organs in Women, and their Treatment. By A. C. F. RABAGLIATI, M.A., M.D., F.R.C.S. [In the Press.]

**Hair.** The Hair: its Growth, Care, Diseases, and Treatment. By C. H. LEONARD, A.M., M.D. Illustrated, price 7s. 6d.

**Hair.** A Synopsis of Diseases of the Skin and Hair. By R. GLASGOW-PATTESON, M.B., Surgeon to St. Vincent's Hospital. Price 1s.

**Hand.** Movable Atlas of the Hand; its Bones, Muscles and Attachments. By Prof. WITKOWSKI. Price 7s. 6d. (See Anatomy.)

**Hay Fever:** its Causes, Treatment, and Effective Prevention; Experimental Researches. By CHAS. HARRISON BLACKLEY, M.D. Second edition, revised and enlarged. Price 10s. 6d.

**Heart.** Heart-Studies, Chiefly Clinical. By WM. EWART, M.D. Cantab., F.R.C.P., Physician to St. George's Hospital; Examiner in Medicine at the Royal College of Physicians.

I.—The Pulse-Sensations. A Study in Tactile Sphygmology. Price 15s.

**Heart.** An Essay on Fatty Heart. By HENRY KENNEDY, A.B., M.B. Physician to the Whitworth Hospitals. Price 3s. 6d.

**Heart.** Clinical Diagrams, with Directions for Recording Cases of Heart Disease. By GEO. HERSCHELL, M.D. Lond. Price 1s.

**Heredity and Disease.** From Generation to Generation. By DOUGLAS LITHGOW, LL.D., M.R.C.P. Lond. Price 4s. 6d.

**Hernia and Intestinal Obstruction.** By J. ROCHE, M.D. 6d.

**Histology.** Manual for the Physiological Laboratory. By VINCENT D. HARRIS, M.D., F.R.C.P., Examiner in Physiology, the Royal College of Physicians of London, and D'ARCY POWER, M.B. Oxon., Examiner, St. Bartholomew's Hospital. Fifth edition. Price 7s. 6d.

"This manual is already well and favourably known, and the new edition contains many valuable additions."—*Lancet.*

**Histology.** Introduction to Practical Histology. By GEORGE THIN, M.D. Price 5s.

**Histology.** Text-book of Normal Histology: including an Account of the Development of the Tissues and of the Organs. By GEO. A. PIERSOL, M.D., Professor of Anatomy in the University of Pennsylvania. Price 15s.

**Histology.** The Microscopical Examinations of the Human Brain; Methods of Research, etc. By EDWIN GOODALL, M.D. Lond., Pathologist to the West Riding Asylum. Price 5s.

**History of the Royal College of Surgeons in Ireland.** By Sir C. A. CAMERON. Price 10s. 6d.

**Hydrophobia.** Inoculation for Rabies and Hydrophobia. A Study of the Literature of the subject. By Surgeon-General C. A. GORDON, C.B. Price 2s. 6d.

**Hydrophobia.** Comments on the Reports of the Committee on M. Pasteur's Treatment. By Surgeon-General C. A. GORDON, M.D., C.B. Price 2s. 6d.

**Hydropathy, or the Practical Use of Cold Water.** By E. MARLETT BODDY, F.R.C.S., F.S.S., L.R.C.P. Price 1s.

**Hydropathy.** Notes of Visits to Contrexéville and Royat-les-Bains. By F. R. CRUISE, M.D. Price 6d.

**Hydropathy.** Vichy and its Therapeutical Resources. By PROSSER JAMES, M.D., M.R.C.P. Lond., Lecturer on *Materia Medica* and Therapeutics at the London Hospital. Price 2s. 6d.

**Hygiene.** Lessons in Military Hygiene and Surgery, from the Franco-Prussian War. Prepared on behalf of Her Majesty's Government By Surgeon-General GORDON, M.D., C.B., Hon. Physician to the Queen. Illustrated, price 10s. 6d.

**Hygiene.** A Manual of Sanitation; or, First Help in Sickness and when Wounded. Alphabetically arranged. By the same Author. Cloth, 2s. 6d.; sewn, 1s.

"A most useful and practical manual, and should be placed in the hands of officers and men alike."—*The Graphic.*

**Hygiene.** Nature's Hygiene. A Systematic Manual of Natural Hygiene. By C. T. KINGZETT, F.I.C., F.C.S. Fourth Edition. Price 10s.

**Hygiene.** The Elements of School Hygiene for the Use of Teachers and Schools. By W. E. ROTH, B.A. Price 3s. 6d.

**Hygiene.** Theatre Hygiene, a study in construction, safety and healthy arrangement. By W. E. ROTH, B.A. Oxon. Price 1s. 6d.

**Hygiene.** Healthy Homes. By STANLEY HAYNES, M.D., M.R.C.S., F.R.G.S. Price 1s.

**Hygiene.** Notes on Nuisances, Drains, and Dwellings. By W. H. PENNING, F.G.S. Second edition. Price 6d.

**Hygiene.** Short Lectures on Sanitary Subjects. By RICHARD J. HALTON, L.K.Q.C.P., L.R.C.P. Ed., L.R.C.S.I., etc. Price 5s.

**Hygiene.** A Manual of Naval Hygiene, with Instructions and Hints on the Preservation of Health and the Prevention of Disease on board Ship. By JOSEPH WILSON, M.D. Second edition. 10s. 6d.

**Hygiene.** The Sanitation of Public Institutions. The Howard Prize Essay. By R. D. R. SWEETING, M.R.C.S., Medical Superintendent of the Western Fever Hospital. Price 3s. 6d.

**Hygiene of Beauty.** By Dr. MONIN. Translated by B. CARDWELL. Price 3s. 6d.

**Hypnotism.** Psycho-Therapeutics. Treatment by Hypnotism and Suggestion. By J. LLOYD TUCKEY, M.D. Third edition, enlarged. Price 6s.

**Indigestion:** a Manual of the Diagnosis and Modern Treatment of the Different Varieties of Dyspepsia. By GEORGE HERSCHELL, M.D. Lond. New edition. [In the Press.

**Inflammation.** The State of the Blood and the Bloodvessels in Inflammation. By T. WHARTON JONES, F.R.C.S., F.R.S., Emeritus Professor of Ophthalmic Medicine and Surgery in University College, London. Price 2s. 6d.

"The work is that of a man of genius of the highest order."—Dr. RICHARDSON, F.R.S., in *Asclepiad.*

"A thoughtful study founded on the ripe experience of an author entitled to the highest respect."—*Medical Press.*

**Insanity.** Handbook for Attendants on the Insane. Price 2s.

**International Medical Congress.** The Commemorative Portrait-Picture of the International Medical Congress, 1881. Designed and executed by Mr. BARRAUD; nearly 700 Likenesses of Members, representing Medicine and Surgery in every part of the world; special sittings accorded for every Portrait.

*The Picture is Printed by the New Permanent Carbon Process in two Sizes:*

EXTRA SIZE, 47 x 30, MOUNTED, BUT UNFRAMED £7 10s. FRAMED £10 0s.  
POPULAR SIZE, 29 x 20, MOUNTED, BUT UNFRAMED £3 3s. FRAMED £4 10s.

**Intestinal Surgery.** (See Abdominal Surgery.)

**Kidneys.** Vaso-Renal Change *versus* Bright's Disease. By J. MILNER FOTHERGILL, M.D. Ed. Price 7s. 6d.

**Kidneys.** Bright's Disease of the Kidneys. By Professor J. M. CHARCOT. Translated by H. B. MILLARD, M.D., A.M. Revised by the Author, with coloured plates, price 7s. 6d.

**Kidneys.** Movable Kidney and Intermittent Hydronephrosis. By G. D. KNIGHT, M.D. Price 3s. 6d.

**Materia Medica.** A Dictionary of Materia Medica and Therapeutics. A Résumé of the Action and Doses of all Officinal and Non-officinal Drugs now in Common Use. By C. HENRI LEONARD, A.M., M.D., and THOS. CHRISTY, F.L.S., F.C.S. Price 6s. ; half morocco, 8s. 6d.

This volume has been in preparation for the past four years. The drugs of as late introduction as 1891 are to be found in its pages. The authors claim to have incorporated every thing of merit, whether officinal or non-officinal, that could be found either in standard works or from many manufacturers' catalogues. The scheme embraces the Pronunciation, Genitive case-ending, Common Name, Dose, and Metric Dose. Then the Synonyms, English, French, and German. *If a Plant* the Part Used, Habitat, Natural Order, and Description of Plant and Flowers, with its Alkaloids, if any. *If a Mineral*, its Chemical Symbol, Atomic Weight, looks, taste, and how found, and its peculiarities. Then the Action and Uses of the Drug, its Antagonists, Incompatibles, Synergists and Antidotes. Then follow its Officinal and Non-officinal preparations, with their Medium and Maximum Doses. Altogether it will be found a handy volume for either the Physician, Student, or Druggist, and will be frequently appealed to if in one's possession.

"Will, we are sure, fulfil a long-felt want."—*British and Colonial Druggist.*

"Well up to date. . . . Contains an index of great value."—*Chemist and Druggist.*

**Materia Medica.** Table of Doses. By J. H. ALLAN, F.C.S. Price 6d., cloth.

**Materia Medica.** A Key to Organic Materia Medica. By JOHN MUTER, Ph.D., M.A., F.C.S., President of the Society of Public Analysts. Third edition. Price 12s. 6d.

**Materia Medica.** Aids to Materia Medica and Therapeutics. By C. E. ARMAND SEMPLE.

Part I.—The Non-metallic and Metallic Elements, Alcoholic and Ethereal Preparations, etc. Cloth, 2s. 6d. ; paper, 2s.

Part II.—The Vegetable and Animal Substances. 2s. 6d., 2s.

Part III.—Classification of Remedies. Cloth, 1s. 6d. ; paper, 1s.

Part IV.—New Remedies of the British Pharmacopœia. Cloth, 2s. 6d. ; paper, 2s.

Part V.—Tablets of Materia Medica. Price, cloth, 1s. 6d.; paper, 1s.

**Materia Medica and Pharmacy.** A Text-Book for Medical and Pharmaceutical Students preparing for Examination. By W. HANDSEL GRIFFITHS, Ph.D., F.C.S., F.R.C.P. Ed. Third edition. Edited by A. S. GUBB, M.D. Paris, L.R.C.P. Lond., M.R.C.S., D.P.H., Gold Medallist, Prizeman in Materia Medica, Westminster Hospital. Price 7s. 6d.

"A book of great value . . . a standard text-book."—*Edin. Med. Journal.*

"One of the ablest, if not the best, work on the subject in our language."—*Med. Press.*

**Materia Medica.** Notes on Inorganic Materia Medica, and its Chemistry. By J. S. SHARMAN. Second edition. Price 1s. 6d.

**Materia Medica.** Notes on Materia Medica and Therapeutics. Mineral Drugs, Part I. By J. S. MCARDLE. Price 1s.

**Medical Charities.** The Reform of Our Voluntary Medical Charities. By ROBERT REID RENTOUL, M.D. Price 5s.

**Medical Education.** Medical Education and Organization. The Hunterian Oration for 1880. By WALTER RIVINGTON, B.A., M.B., F.R.C.S., Surgeon to the London Hospital. Price 1s.

**Medical Etiquette.** A Few Rules of Medical Etiquette. By a L.R.C.P. Lond. Price 1s.

**Medical Jurisprudence.** (See Forensic Medicine.)

**Medical Laws.** Medical Law for Medical Men: their Legal Relations popularly explained. By Professor MEYMOtt TIDY, M.B., F.C.S., Barrister-at-Law, and PERCY CLARKE, LL.B., Solicitor. Leather, gilt edges, price 4s.

**Medical Laws.** The Laws Relating to Medical Men. By JAMES GREENWOOD, Barrister-at-Law. Price 5s.

"Admirably suited as a guide to the busy practitioner, who frequently runs great risks of becoming involved in legal penalties, in consequence of an imperfect knowledge of the law."—*Glasgow Medical Journal*.

**Medical Profession.** A Guide to the Medical Profession in all its branches, including the Public Services. By C. R. B. KEETLEY, F.R.C.S. Second edition. Price 3s. 6d.

**Medical Profession.** Medical Men and Manners of the Nineteenth Century. By a Physician. Third Thousand. Price 3s.

"At times scathing, at others amusing, the author is never dull, and writes as one who knows the many blots on our system, and honestly tries to remedy them."—*Medical Press*.

**Medicine.** Dictionary of Medicine. (See p. 18.)

**Medicine.** Aids to Medicine. By C. E. ARMAND SEMPLE, B.A. M.B. Cantab., M.R.C.P. Lond.

Part I.—General Diseases. Price 2s. 6d. and 2s.

Part II.—The Urine, Kidneys, Stomach, Peritoneum, Throat, and Oesophagus. Third Thousand. Price 2s. 6d. and 2s.

Part III.—Diseases of the Brain, Nervous System, and Spinal Cord. Third Thousand. Price 2s. 6d. and 2s.

Part IV.—Fevers, Skin Diseases. Price 2s. 6d. and 2s.

**Medicine.** A Chronology of Medicine from the Earliest Times. By J. MORGAN RICHARDS. Price 10s. 6d.

**Medicine.** Student's Handbook of the Practice of Medicine. By H. AUBREY HUSBAND, M.B., C.M., B.Sc. Fifth edition. Illustrated. [In the Press.]

**Medicinal Remedies.** Notes on Medicinal Remedies. By J. B. STEPHENSON. Price 1s. 6d.

**Medico-Military Services.** Our Services under the Crown. A Historical Sketch of the Army Medical Staff. By Surgeon-Major A. GORE, M.D., Sanitary Officer on the Staff. Price 6s.

**Memory.** Its Logical Relations and Cultivation. By F. W. EDRIDGE-GREEN, M.D., F.G.S., Author of "Colour Blindness." Second edition. Price 6s.

**Meteorology.** The Moon and the Weather: the Probability of Lunar Influence Reconsidered. Showing how storms and depressions may be predicted. By WALTER J. BROWNE (St. Petersburg). Second edition. Price 3s.

**Microscopical Science.** The International Journal of Microscopy and Natural Science. Edited for the Postal Microscopical Society by ALFRED ALLEN. Quarterly, with Plates. Price 2s. 6d.

**Microscopical Science.** Modern Microscopy. A Handbook for Beginners, in two parts. I. The Microscope, and Instructions for its Use. II. Microscopic Objects: How Prepared and Mounted. By M. I. CROSS and MARTIN J. COLE. Price 2s. 6d.

**Midwifery.** (See Obstetrics.)

**Mineral Waters.** The Mineral Waters of Europe. A complete Analytical Guide to all the Bottled Waters, and their Medicinal and Therapeutic Values. By Professor TICHBORNE, LL.D., and M. PROSSER JAMES, M.R.C.P. Lond. Price 3s. 6d.

"Such a book as this is simply invaluable."—*The World*.

**Morals.** A Physician's Sermon to Young Men. By WILLIAM PRATT, M.A., M.D., etc. Eighth thousand. Price 1s. cloth.

"The delicate topic is handled wisely, judiciously, and religiously, as well as very plainly."—*The Guardian*.

**Morals.** Revelations of Quacks and Quackery. With Facts and Cases in Illustration of their Nefarious Practices. By "DETECTOR." Thirtieth thousand. Price 2s.

**Morphia.** On the cure of the Morphia Habit. By OSCAR JENNINGS, M.D. Paris, F.R.C.S. Eng. Price 2s. 6d.

**Nerve Supply.** Atlas of Cutaneous Nerve Supply. By JACOB HEIBERG, M.D., and W. W. WAGSTAFFE, F.R.C.S. Containing 10 plates in colours. Price 4s. 6d.

**Nervous Diseases.** Functional Nervous Diseases, their Causes and Treatment. By GEO. T. STEVENS, M.D., Ph.D. With plates. Price 12s.

**Nervous Diseases.** Clinical Notes on Nerve Disorders in Surgical Practice. By GEO. WHERRY, M.A., M.S. Cantab., F.R.C.S. Price 2s.

**Nervous Diseases.** (See also Brain.)

**Neuralgia.** The Surgical Treatment of Neuralgia of the Fifth Nerve; being the Lettsomian Lectures for 1892. By WM. ROSE, M.B., B.S. Lond., F.R.C.S., Joint Professor of Surgery in King's College, London, and Surgeon to King's College Hospital. Illustrated. Price 4s. 6d.

**Nose.** A Handbook of Diseases of the Nose and Pharynx. By JAS. B. BALL, M.D. (Lond.), M.R.C.P., Physician to the West London Hospital. Second edition. Price 7s. 6d.

**Nursing.** Handbook for Attendants on the Insane. Published by the authority of the Medico-Psychological Association. With illustrations and questions for examinations. Second edition. Price 2s.

**Nursing.** Handbook of Obstetrical and Gynaecological Nursing, being the fifth edition of "A Manual for Midwives." By the late DR. FLEETWOOD CHURCHILL. Revised and greatly enlarged by THOS. MORE MADDEN, M.D., F.R.C.S. Eng. With numerous illustrations. Price 4s. net.

**Nursing.** Questions and Answers on Nursing, for St. John's Ambulance Associations, Nursing Institutes, and Nurses generally. By JOHN W. MARTIN, M.D., Author of "Ambulance Work." Fourth thousand. Price 1s. 6d. net.

**Nursing.** How to Feed an Infant. With an Appendix on the Common Ailments of Infancy, with their Hygienic and Curative Treatment. By BENSON BAKER, M.D. Price 1s. 6d.

**Nursing.** How to bring up Children by Hand. By J. FOSTER PALMER, L.R.C.P. Price 6d.

**Nursing.** Practical Guide for the Young Mother. From the French of DR. BROCHARD, Director-General of Nurseries and Crêches, with Notes and Hints by a London Physician. Price 2s.

**Obstetrics.** Aids to Obstetrics. By SAMUEL NALL, M.B. Cantab., M.R.C.P. Lond., First Class Honours Nat. Sci. Cambridge, late Resident Obstetric Assistant, St. Bartholomew's Hospital. Twelfth thousand. Price 2s. 6d. cloth; 2s. paper wrapper.

**Obstetrics.** Hints for Midwives on Pregnancy and Labour. Abstracts of a Series of Lectures by H. MACNAUGHTON JONES, M.D., M.C.H., F.R.C.S. Price 1s. net.

**Obstetrics.** The Diagnosis and Treatment of Extra-uterine Pregnancy. By JOHN STRAHAN, M.D., M.Ch. (The Jenks Triennial Prize Essay awarded by the College of Physicians, 1889.) Price 4s. 6d.

**Obstetrics.** Hints for the Use of Midwives preparatory to their Examinations. By R. J. M. COFFIN, F.R.C.P. Ed. Second Edition, enlarged. Price 2s.

**Odontology.** (See Dental.)

**Old Age.** The Diseases of Sedentary and Advanced Life. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. Price 7s. 6d.

**Ophthalmology.** (See Eye.)

**Osteology.** Osteology for Students, with Atlas of Plates. By ARTHUR TREHERN NORTON, F.R.C.S., Surgeon to, and Lecturer on Surgery at, St. Mary's Hospital. Atlas and Text in one volume, 7s. 6d. ; in two volumes, 8s. 6d.

"The handiest and most complete handbook on Osteology."—*The Lancet*.

**Osteology.** Atlas of the Skeleton and its Articulations, showing the Bones and Ligaments of the Human Body and Limbs. By Professor WITKOWSKI. Price 7s. 6d. (See Anatomy.)

**Overwork.** Overwork and Premature Mental Decay : its Treatment. By C. H. F. ROUTH, M.D., M.R.C.P. Lond. Fourth edition. Price 2s. 6d.

**Pathology.** Lectures on Medical Pathology. By H. G. SUTTON, M.B., F.R.C.P. Lond., late Physician to, and Lecturer on Pathology at, the London Hospital. Price 5s.

"Such a work is to be accepted with gratitude for the thoughts it contains, and the on which they are based."—*The Lancet*.

**Pathology.** Handbook of Medical Pathology for the use of Students in the Museum. By Drs. HERRINGHAM, GARROD, and GOW, of St. Bartholomew's Hospital. Price 7s. 6d.

**Pathology.** Handbook of Surgical Pathology. Edited by W. J. WALSHAM, M.B., F.R.C.S., and D'ARCY POWER, M.B. Oxon., F.R.C.S. Second edition. Price 9s.

"An embodiment of the most modern pathological teaching."—*The Lancet*.

**Pathology.** Aids to Pathology. By GILBERT A. BANNATYNE, M.D. General : Cloth, 1s. 6d. sewn, 1s. Special : Cloth, 2s. 6d. ; sewn, 2s.

**Pathology.** Illustrations of Pathological Anatomy issued in parts, each containing 4 plates in colours, with descriptive text by PROFESSORS KAST, of Breslau, and RUMPEL, of Hamburg. The English edition revised and edited by M. ARMAND RUFFER, M.D. Oxon. Twelve parts by subscription, post free, £2 8s. Single parts, 6s. each. Single plates, 1s. 6d. each.

**Pathology. Examination Cards.** Arranged as questions and answers for self-examination. By A. T. SCHOFIELD, M.D., M.R.C.S. Complete in two sets of cards, price 9d. net per set. Mr. Jonathan Hutchinson, F.R.C.S., writes: "It is an invaluable means of self-tuition."

**Peritonitis.** Localised Peritonitis: its Etiology, Diagnosis, and Treatment. By JOHN WALLACE, M.D., Professor of Midwifery in the Victoria University. Illustrated. Price 1s.

**Pharmacopœia.** A Vest-Pocket Epitome of the British Pharmacopœia. By RUSSELL COOMBE, M.A., F.R.C.S. Cloth, price 1s.

**Pharmacopœia.** The Pocket Pharmacopœia. A Précis of the British Pharmacopœia, including the Therapeutical Action of the Drugs, their Natural Orders and Active Principles. By C. ARMAND SEMPLE, M.D., M.R.C.P. Second edition, with the Appendix of 1890. Price 3s. 6d.

**Pharmacopœia.** Notes on the Pharmacopœial Preparations for Pharmaceutical Students. By HANDSEL GRIFFITHS; revised by A. S. GUBB, M.D. Paris, L.R.C.P., M.R.C.S., D.P.H. Price 3s. 6d.

**Pharmacy.** Latin Grammar of Pharmacy, for the use of Students, with an Essay on Latin Prescriptions. By JOSEPH INCE, A.K.C.L., formerly Examiner and Member of Council, Pharmaceutical Society. Sixth edition. Price 5s.

**Pharmacy.** Aids to Pharmacy. By C. E. ARMAND SEMPLE, M.B. Cantab., M.R.C.P. Lond. Cloth, price 2s. 6d.; paper, 2s.

**Pharmacy.** Practical Pharmacy for Medical Students. By A. CAMPBELL STARK, Demonstrator on *Materia Medica* and Pharmacy at St. George's Hospital. Price 3s. 6d., or interleaved for note-taking, 4s. 6d.

**Pharmacy.** Doses and Strengths of the British Pharmacopœia. By the Principals of the Middlesex College of Chemistry. Price 6d.

**Phimosis.** Its Causes, Symptoms, and Treatment; with a description of the ancient rite of circumcision. By L. H. ORMSBY, M.D., F.R.C.S.I., Lecturer on Clinical and Operative Surgery at, and Surgeon to, the Children's Hospital, Dublin. Price 1s.

**Physics.** A Manual of Physics. Being an Introduction to the Study of Physical Science designed for University Students. By W. PEDDIE, D.Sc., F.R.S.E., Lecturer on Physics in the University of Edinburgh. (*University Series of Manuals.*) 7s. 6d.

"Altogether worthy of praise. . . . We have no hesitation in giving it high commendation. . . . We wish it all success, feeling well satisfied that it meets a decided want."—*Nature*.

"Dr. Peddie's manual is deserving of the highest praise."—*Lancet*.

"Written with a precision of statement and clearness of exposition which does the writer infinite credit."—*Dundee Advertiser*.

"A very handy work of reference."—*University Correspondent*.

"The work must be pronounced highly satisfactory, creditable to author and publishers, and calculated to be useful to the readers for whom it is intended."—*Chemical News*.

"The book deserves an extended circulation."—*Science and Art*.

**Physiological Chemistry.** Aids to Physiological Chemistry. By J. L. THUDICHUM, M.D., F.R.C.P. Lond., St. Thomas's Hospital. Cloth, price 2s. 6d. Sewn, 2s.

**Physiological Factor in Diagnosis.** By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond., Physician to the City of London Hospital for Diseases of the Chest. Second edition. Price 7s. 6d.

**Physiology.** A Manual of Physiology. By G. N. STEWART, M.A., D.Sc. University of Cambridge. (*University Series of Manuals.*)

[In the Press.]

**Physiology.** The Physiologist in the Household. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Part I.—Adolescence. Price 1s.

**Physiology.** Aids to Physiology. By B. THOMPSON LOWNE, F.R.C.S., Arris and Gale Lecturer, and Examiner in Physiology, Royal College of Surgeons of England. Fourth thousand, illustrated. In two parts, 2s. each, or in one vol., cloth, 4s. 6d.

"As 'aids' and not substitutes, they will prove of real value to students."—*Medical Press.*

"Certainly one of the best of the now popular 'Aid Series.' "—*Students' Journal.*

**Plant Analysis.** (See Chemistry.)

**Polypus** in the Nose and other Affections of the Nasal Cavity; their successful treatment. By J. L. W. THUDICHUM, M.D., F.R.C.P. Lond. Seventh edition, enlarged. Price 2s. 6d.

**Population.** On the Evils, Moral and Physical, likely to follow, if practices, intended to act as checks to population, be not strongly discouraged and condemned. By C. H. F. ROUTH, M.D., F.R.C.P. Second thousand. Price 1s.

**Posology.** Posological Tables: a Classified Chart, showing at a glance the Dose of every Officinal Substance and Preparation. By HANDSEL GRIFFITHS, Ph.D., L.R.C.P. Fifth edition, revised by PETER W. SQUIRE, F.L.S., F.C.S. Price 1s. ; or mounted on linen, rollers, and varnished, 3s. 6d.

**Pregnancy.** (See Obstetrics.)

**Prescriptions.** The Student's Pocket Prescriber. By H. AUBREY HUSBAND, M.B., F.R.C.S.E. Price 1s. cloth.

**Psychological Medicine** in John Hunter's Time and the Progress it has made. By FLETCHER BEACH, M.B., F.R.C.P. Price 1s.

**Psycho-Therapeutics.** (See Hypnotism.)

**Public Health.** Aids to Sanitary Science, for the Use of Candidates for Public Health Qualifications. By F. J. ALLAN, M.D., Dipl. Public Health, Camb., Assistant Professor of Hygiene, College of State Medicine. Price 4s. 6d. cloth.

"A really admirable synopsis of what it is most necessary for a candidate to know."—*Glasgow Medical Journal.*

"The information contained is correct, well expressed and well arranged."—*Public Health.*

"The work has been well done. . . . Will be found a serviceable and reliable aid."—*Edinburgh Medical Journal.*

**Public Health.** The Practical Guide to the Public Health Acts and Correlated Acts for Officers of Health and Inspectors of Nuisances. By THOS. WHITESIDE HIME, B.A., M.B. Second edition, enlarged. Price . . .

**Public Health.** Aids to Public Health. By J. L. THUDICHUM, M.D., F.R.C.P. Lond. Price 1s. 6d. cloth; 1s. paper.

**Public Health.** Guide to Sanitary Science Examinations. By HERBERT JONES, D.P.H. Cantab. Price 2s. 6d.

**Pulse.** How to feel the Pulse and what to Feel in it. Practical Hints for Beginners. By WILLIAM EWART, M.D., F.R.C.P. Lond., Physician to St. George's Hospital. With a glossary and twelve illustrations. Price 3s. 6d.

**Pulse.** The Sphygmograph: its History and use as an aid to Diagnosis. By R. E. DUDGEON, M.D. Price 2s. 6d.

**Rabies.** (See Hydrophobia.)

**Respiration.** Keep your Mouth Shut; a Popular Treatise on Mouth-breathing. By FRED. A. A. SMITH, M.D., C.M. Glas. Price 2s. 6d.

**Rheumatism.** Its Treatment by Electric Massage, etc., in connection with the Wiesbaden Thermal Waters. By CARL MORDHORST, M.D. Kiel. Price 1s.

**Rupture of the Perineum.** Its Causes, Prevention and Treatment. By MICHAEL JOSEPH MOLONY M.R.C.P., L.R.C.S. Price 2s. cloth, 1s. 6d. paper.

**Salt.** History of Salt, with Observations on its Medicinal and Dietetic Properties. By EVAN MARLETT BODDY, F.R.C.S., F.S.S., L.R.C.P. Price 2s. 6d.

**Sewage.** The Sewage Question: Reports upon the Principal Sewage Farms and Works of the Kingdom, with Notes and Chemical Analyses. By the late Dr. LETHEBY. Price 4s. 6d.

**Skin Diseases of Infancy and Early Life.** By C. M. CAMPBELL, M.D., C.M. Edin. Price 5s.

**Skin.** A Synopsis of Diseases of the Skin and Hair. By R. GLASGOW PATTESON, M.B., Surgeon to St. Vincent's Hospital. Price 1s.

**Skin.** Dermic Memoranda: An Introduction to the Study of Skin Disease, with Special Reference to the Exanthemata. By WILLIAM GEMMEL, M.B., Glasgow Fever Hospital. Price 3s. net.

**Skin.** Some Diseases of the Skin produced by Derangements of the Nervous System. By T. STRETCH DOWSE, M.D., F.R.C.P.E. Price 2s.

**Stomach.** The Surgical Diseases and Injuries of the Stomach and Intestines. By F. BOWREMAN JESSETT, F.R.C.S., Surgeon to the Cancer Hospital. Numerous engravings. Price 7s. 6d.

**Stricture.** Stricture of the Urethra: its Diagnosis and Treatment. By E. DISTIN MADDICK, F.R.C.S. Edin., late Surgeon R.N. 4s.

**Surgery.** The Science and Practice of Surgery, a Complete Text-book. By F. J. GANT, F.R.C.S., Senior Surgeon Royal Free Hospital. Third edition, with nearly 1,100 engravings. 2 vols., price 36s.

"The entire work has been revised to present the modern aspects of Surgery."—*Lancet.*  
"Does credit to the author's thorough surgical knowledge."—*British Medical Journal.*

**Surgery.** The Student's Surgery: a Multum in Parvo. By F. J. GANT, F.R.C.S. 850 pp., illustrated. Price 10s. 6d.

"It well fulfils the object for which it is written."—*Lancet.*

"From the student's point of view it is a necessity."—*British Medical Journal.*

**Surgery. Operative Surgery on the Cadaver.** By JASPER J. GARMANY, A.M., M.D., F.R.C.S. Price 8s. 6d.

**Surgery.** Aids to Surgery. By GEORGE BROWN, M.R.C.S. 2 parts, price 1s. 6d. cloth, and 1s. sewn, each; or in 1 vol., 2s. 6d.

**Surgery.** The Text-book of Operative Surgery. With 88 beautifully engraved steel plates, after BERNARD and HUETTE. Text by ARTHUR TREHERN NORTON, F.R.C.S., Surgeon to, and Lecturer on Surgery at, St. Mary's Hospital. Second edition, half calf, plain, 25s. ; hand-coloured, 50s.

**Surgery.** Clinical Lectures on Recent Surgery. By ARTHUR TREHERN NORTON, F.R.C.S. Price 3s.

**Surgery.** The Anatomy of Surgery. By JOHN McLACHLAN, M.B., M.R.C.S. With 74 illustrations. Two vols., price 18s.

**Surgery.** The Surgery of the Knee-Joint, and the Responsibility placed on the Physician and General Practitioner by the Modern Process of Surgery. By C. B. KEETLEY, F.R.C.S., Senior Surgeon to the West London Hospital, and Surgeon to its Orthopædic Department. Cloth, price 1s. 6d.

**Surgery. Brain Surgery.** By M. ALLEN STORR, M.D. With 59 illustrations. Price 10s. 6d.

**Surgery, Minor—and Bandaging.** Questions and Answers for Self-examination. By A. T. SCHOFIELD, M.D. Price 9d. net.

**Surgical Pathology.** Handbook of Surgical Pathology. By W. J. WALSHAM, M.B., F.R.C.S., and D'ARCY POWER, M.B., F.R.C.S. Second edition. Price 9s.

"An embodiment of the most modern pathological teaching."—*The Lancet.*

**Surgical Anatomy.** (See Surgery.)

**Surgical Treatment.** Notes on Surgical Treatment and Minor Operations. Designed especially for House Surgeons and Students. By T. F. HOPGOOD, L.R.C.P., M.R.C.S. Surgeon to the Sunderland Infirmary. Price 2s. 6d.

## 34 Baillière, Tindall, and Cox's Books.

**Syphilis.** Syphilis of the Brain and Spinal Cord, showing the part which this agent plays in the production of Paralysis, Epilepsy, Insanity, Headache, Neuralgia, Hysteria, and other Mental and Nervous Derangements. By T. STRETCH DOWSE, M.D., F.R.C.P. Ed. Second edition, illustrated. Price 5s.

**Syphilis.** The Nature and Treatment of Syphilis, and the other so-called Contagious Diseases. By C. R. DRYSDALE, M.D., M.R.C.P. Lond., F.R.C.S. Eng. Fifth edition. Price 5s.

**Temperature Charts** for Recording the Range of Temperature, Pulse, Respiration, History, Progress, and Treatment of Cases. By E. W. MOORE, M.D., M.R.C.P. Price 1d. each, 9d. per dozen; or mounted, similar to a blotting-pad, 50, 3s. 6d.; 100, 7s.

**Theories of Life.** The Protoplasmic Theory of Life. By JOHN DRYSDALE, M.D., F.R.M.S. Price 5s.

**Theories of Life.** How to Prolong Life. Showing the Diet and Agents best adapted for a lengthened prolongation of existence. By C. W. DE LACY EVANS, M.R.C.S. Second edition. Price 5s. "A good account of the changes which occur with the advance of age."—*Lancet*.

**Therapeutics.** Modern Therapeutics, Medical and Surgical. By GEO. H. NAPHEYS, A.M., M.D. Ninth edition. Revised and enlarged by Drs. Allen Smith and Aubrey Davis.

Vol. I.—General Medicine, and Diseases of Children. Price, half morocco, £1 10s.

Vol. II.—General Surgery, Gynaecology, and Obstetrics. Price, half morocco, £1 10s.

**Therapeutics.** The Therapeutics of the Respiratory Passages. By PROSSER JAMES, M.D., Lecturer on Materia Medica and Therapeutics at the London Hospital. Price 10s. 6d.

"Dr. Prosser James has produced a scholarly treatise."—*New York Medical Record*.

**Therapeutics.** Aids to Rational Therapeutics, for the guidance of Practitioners and Senior Students. By J. MILNER FOTHERGILL, M.D. Second edition. Price 2s. 6d. cloth; 2s. paper wrapper.

**Throat.** Movable Atlas of the Throat, and the Mechanism of Voice, Speech and Taste. By Prof. WITKOWSKI. (See Anatomy.)

**Throat.** Diseases of the Throat and Nose. A Practical Guide to Diagnosis and Treatment. With 220 typical illustrations in chromolithography and numerous wood engravings. By LENNOX BROWNE, F.R.C.S. Edin., Senior Surgeon to the Central London Throat and Ear Hospital. Fourth edition. Price 21s.

"One of the completest treatises on diseases of the throat in any language."—*British Medical Journal*.

"The best text-book in the English language."—*Edinburgh Medical Journal*.

**Throat.** Affections of the Throat and Larynx. By ARTHUR TREHERN NORTON, F.R.C.S., Surgeon to St. Mary's Hospital. Second edition, illustrated. Price 6s.

"Short, simple, and thoroughly practical instruction."—*Medical Press.*

**Throat.** Tonsillitis in Adolescents. By C. HAIG-BROWN, M.D., C.M., Medical Officer to the Charterhouse. Price 3s.

**Transfusion.** On Transfusion of Blood and Saline Fluids. By C. EGERTON JENNINGS, F.R.C.S. Third edition, with Preface by SIR SPENCER WELLS, Bart. Price 4s. 6d.

**Tuberculosis.** (See Consumption.)

**Urinary Diseases.** Diseases of the Bladder, Prostate Gland, and Urethra. By F. J. GANT, F.R.C.S., Senior Surgeon to the Royal Free Hospital. Fifth edition, enlarged. Price 12s. 6d.

"The work throughout bears evidence of having been written by a thoroughly practical and experienced surgeon."—*Lancet.*

**Urinary Surgery.** Urinary Surgery of the present day contrasted with that of twelve years ago. By F. SWINFORD EDWARDS, F.R.C.S. Price 1s.

**Urine. The Urine in Health and Disease, and Urinary Analysis.** By D. CAMPBELL BLACK, M.D., Professor of Physiology in Anderson's College, Glasgow. [In the press.]

**Urine.** The Urine; a Guide to its Practical Examination. By J. TYSON, M.D., Professor of Morbid Anatomy in the University, and President of the Pathological Society of Philadelphia. Seventh edition, with numerous illustrations. Price 7s. 6d.

"We think it the most practically useful guide we have on the subject."—*Medical Record.*

**Vichy.** Vichy and its Therapeutical Resources. By PROSSER JAMES, M.D., M.R.C.P. Lond. Price 2s. 6d.

**Voice.** The Philosophy of Voice. Showing the right and wrong Action of the Breath and Vocal Cords in Speech and Song. By CHARLES LUNN. Seventh edition. [In preparation.]

**Voice.** Artistic Voice in Speech and Song. Dedicated to Mr. Sims Reeves and Mr. Santley. By the same Author. 1s.

**Voice.** The Voice Musically and Medically Considered. By C. ARMAND SEMPLE, M.B. Cantab., M.R.C.P. Lond., Physician to the Royal Society of Musicians. Part I. Musical, price 1s.; Part II., Medical, price 2s.; or in one vol., cloth, 3s. 6d.

**Whooping-Cough.** Its Pathology and Treatment. Fothergillian Prize Essay. By THOS. M. DOLAN, M.D., F.R.C.S.E. Price 3s. 6d.

**Zoology and Comparative Anatomy, Aids to.** By MAJOR GREENWOOD, M.D., Honours. Price 2s. 6d., and 2s.

## THE STUDENTS' AIDS SERIES.

Specially designed to assist Students in committing to memory and grouping the subjects upon which they are to be examined.

**Aids to Analysis of Food and Drugs.** By H. AUBREY HUSBAND, M.B., F.R.C.S. 1s. 6d. cloth ; 1s. paper.

**Aids to Anatomy.** By GEORGE BROWN, M.R.C.S., Gold Medalist, Charing Cross Hospital. 2s. 6d. cloth ; 2s. paper.

**Aids to Biology.** By JOSEPH W. WILLIAMS. 2s. 6d. cloth ; 2s. paper wrapper.

**Aids to Botany.** By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond., late Senior Examiner in Arts at Apothecaries' Hall. Third thousand. 2s. 6d. cloth ; 2s. paper.

**Aids to Chemistry.** By the same Author.

Part I.—Inorganic: Non-Metallic Substances. 2s. 6d. cloth ; 2s. paper wrapper.

Part II.—Inorganic: The Metals. 2s. 6d. and 2s.

Part III.—Organic. Price, 2s. 6d. and 2s.

Part IV.—Tablets of Chemical Analysis. 1s. 6d. and 1s.

**Aids to Practical Chemistry.** Especially arranged for the Analysis of Substances containing a Single Base and Acid Radicle. By T. HURD GORDON. 2s. 6d. cloth ; 2s. paper.

**Aids to the Diagnosis and Treatment of Diseases of Children.** By JOHN McCAW, M.D., L.R.C.P. Price 3s. 6d. cloth ; 3s. paper.

**Aids to Dental Surgery.** By ARTHUR S. UNDERWOOD, M.B., M.R.C.S., Lecturer on Dental Surgery at the Dental Hospital of London. 2s. 6d. cloth ; 2s. paper.

**Aids to Dental Histology.** By the same Author.

Illustrated. 2s. 6d. cloth ; 2s. paper.

**Aids to Diagnosis.** Part I.—Semeiological. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. 1s. 6d. cloth ; 1s. paper.

Part II.—Physical. By J. C. THOROWGOOD, M.D., F.R.C.P. Lond. 1s. 6d. and 1s.

Part III.—What to Ask the Patient. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond. 1s. 6d. and 1s. The three in one vol., 3s. 6d.

"A mine of valuable information."—*Edinburgh Medical Journal*.

**Aids to Examinations.** Being Questions and Answers on *Materia Medica, Medicine, Midwifery, Pathology, etc.* By D. WALSH, M.B., C.M., L.R.C.P. New edition. 2s. 6d. and 2s.

**Aids to Forensic Medicine and Toxicology.** By WM. MURRELL, M.D., F.R.C.P. Lond., Physician to Westminster Hospital. New edition. Price 2s. 6d. cloth; 2s. paper wrapper.

**Aids to Gynæcology.** By ALFRED GUBB, M.D. Paris, D.P.H., Obstetric Assistant and Gold Medallist, Westminster Hospital. New edition. Cloth, 2s. 6d.; paper wrapper, 2s.

**Aids to Materia Medica and Therapeutics.** By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. Lond.

Part I.—The Non-Metallic and Metallic Elements, Alcoholic and Ethereal Preparations. 2s. 6d. cloth; and 2s. paper.

Part II.—Vegetable and Animal Substances, 2s. 6d. and 2s.

Part III.—Classification of Remedies, 1s. 6d. and 1s.

Part IV.—New Remedies. 2s. 6d. and 2s.

Part V.—Tablets of *Materia Medica*. Price 1s. 6d. and 1s.

**Aids to Medicine.** By the same Author.

Part I.—General Diseases. Lungs, Heart, and Liver. Cloth, 2s. 6d.; paper, 2s.

Part II.—The Urine, Kidneys, etc. 2s. 6d. and 2s.

Part III.—The Brain and Nervous System. 2s. 6d. and 2s.

Part IV.—The Fevers, Skin Diseases, etc. 2s. 6d. and 2s.

**Aids to Obstetrics.** By SAMUEL NALL, B.A., M.B. Cantab., M.R.C.P. Lond., late House Physician and Resident Obstetric Assistant, St. Bartholomew's Hospital. Twelfth thousand. Cloth, 2s. 6d.; paper, 2s.

**Aids to Ophthalmic Medicine and Surgery.** By JONATHAN HUTCHINSON, jun., F.R.C.S. Cloth, 2s. 6d.; paper, 2s.

**Aids to Otology.** By W. R. H. STEWART, F.R.C.S. Ed., Aural Surgeon to the Great Northern Hospital, etc. Price 2s. 6d. cloth; 2s. paper wrapper.

**Aids to General Pathology.** By GILBERT A. BANNATYNE, M.D. Cloth, 1s. 6d.; paper wrapper, 1s.

**Aids to Special Pathology.** By the same Author. Cloth, 2s. 6d.; paper, 2s.

**Aids to Pharmacy.** By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. London. Cloth, 2s. 6d.; paper, 2s.

**Aids to Physiology.** By B. THOMPSON LOWNE, F.R.C.S., Examiner in Physiology, Royal College of Surgeons. Fourth thousand. In two parts, price 2s. each; or in one vol., cloth, 4s. 6d.

"Certainly one of the best of the now popular *Aids Series*."—*Students' Journal*.

**Aids to Practical Physiology.** By J. BRINDLEY JAMES, M.R.C.S.  
Cloth, 1s. 6d. ; paper, 1s.

**Aids to Physiological Chemistry.** By J. L. THUDICHUM, M.D.,  
F.R.C.P. Lond., formerly Lecturer on Physiological Chemistry,  
St. Thomas's Hospital. Cloth, 2s. 6d. ; paper, 2s.

**Aids to Psychological Medicine.** By

**Aids to Public Health.** By J. L. THUDICHUM, M.D., F.R.C.P.  
Lond. New edition. 1s. 6d. cloth ; 1s. paper wrapper.

**Aids to Sanitary Science for the Use of Candidates for Public  
Health Qualifications.** By F. J. ALLAN, M.D., Assistant  
Professor of Hygiene, Coll. State Medicine. 236 pp. Cloth,  
4s. 6d. ; or in two parts, paper, 2s. each.

**Aids to Surgery.** In two parts. By GEORGE BROWN, M.R.C.S.  
1s. 6d. cloth, and 1s. paper, each ; or in one vol., cloth, 2s. 6d.

**Aids to Rational Therapeutics.** By J. MILNER FOTHERGILL,  
M.D., M.R.C.P. Lond. 2s. 6d. cloth ; 2s. paper.

**Replies to Questions in Therapeutics.** By BRINDLEY JAMES,  
M.R.C.S. 1s. 6d. cloth ; 1s. paper.

**Aids to Zoology.** By MAJOR GREENWOOD, M.D. Honours in  
Zoology, University of London. 2s. 6d. cloth ; 2s. paper.

**Aids to Mathematics of Hygiene.** By R. BRUCE FERGUSON,  
M.A., M.B. Price 2s. 6d. ; 2s.

---

**Aids to Analytical Geometry.**

The Straight Line and Circle. By A. LE SUEUR, B.A.  
Cantab. Second edition. Price 2s.

The Conic Sections, with solutions of questions set at the  
London and other University Examinations. By GEORGE  
HEPPEL, M.A., St. John's College, Cambridge, Member of  
London Mathematical Society. Price 2s.

---

\* \* \* *A Catalogue of Standard French Works on Medicine, Surgery,  
and the Allied Sciences will be sent post free on application.*

WORKS  
ON  
VETERINARY MEDICINE AND SURGERY.

**Amateur.** Horses: their Rational Treatment and the Causes of their Premature Decay. By AMATEUR. Price 5s.

— An Abridgment of the above. By the same Author. Price 1s.

**Banham.** Tables of Veterinary Posology and Therapeutics. With Weights, Measures, etc. By Professor GEORGE A. BANHAM, F.R.C.V.S. Price 2s. 6d.

**Beacock.** Prize Essay on the Breeding, Rearing, and Fattening of Cattle and Sheep, and proper treatment of Cows at time of Calving. By JOSEPH BEACOCK. Price 3d.

**Burke.** The Tropical Diseases of the Horse. By Captain R. W. BURKE, M.R.C.V.S., A.V.D. Third edition. [In the Press.]

**Courtenay.** The Practice of Veterinary Medicine and Surgery. By E. COURtenay. Price 10s. 6d.

“Written in a clear and concise style: will form a welcome addition to the library of the horse-owner, and those who take an interest in domesticated animals generally.”—*Mark Lane Express*.

**Fleming.** A Text-Book of Veterinary Obstetrics, including the diseases and accidents incidental to pregnancy, parturition and early age in the Domesticated Animals. By GEORGE FLEMING, C.B., LL.D., F.R.C.V.S., F.R.G.S., President of the Royal College of Veterinary Surgeons, late Principal of the Army Veterinary Department. Profusely illustrated. Cloth, price 30s.

“Has filled up a void in a more satisfactory and complete way than any other member of his profession could have done.”—*The Field*.

“No man who makes any pretensions to veterinary science or stock breeding can dispense with this work.”—*Live Stock Journal*.

— Parasites and Parasitic Diseases of the Domesticated Animals. A Treatise by L. G. NEUMANN, Professor at the National Veterinary School of Toulouse. Translated and Edited by GEO. FLEMING, C.B., LL.D., F.R.C.V.S., with 365 illustrations. Price 25s.

“The value and importance of Neumann's Treatise cannot be over-estimated; it is certainly the most scientific, interesting, and useful work that has graced veterinary literature for some years.”—*The Veterinary Journal*.

“We do not hesitate to say that this is a work which all pathologists ought to possess; and the practitioner . . . will not fail to add to his reputation if he has this book on his shelves.”—*The Lancet*.

“This is one of the most useful of the many works with which Dr. Fleming has enriched English Veterinary literature. Although intended as a text-book for the veterinary student and practitioner, the translation has rendered it so readable that every intelligent farmer may derive a fund of useful information from its copiously illustrated pages.”—*Mark Lane Express*.

“Cannot fail to be of immense value to both the veterinary profession and to British stock-breeders.”—*Bell's Weekly Messenger*.

— A Text-Book of Operative Veterinary Surgery. Part I. price 10s. 6d. Part II. in the Press.

**Fleming.** The Contagious Diseases of Animals: their influence on the wealth and health of the nation. Price 6d.

— Animal Plagues; their History from the Earliest Times, Nature, and Prevention. Vol. I., to 1800. Price 15s.

— Vol. II., from A.D. 1800 to 1844. Price 12s.

— On Roaring in Horses (**Laryngismus Paralyticus**). Its History, Pathology, and Treatment. With coloured plate and woodcuts. Price 6s.

— Tuberculosis from a Sanitary and Pathological point of view. Price 1s.

— Human and Animal Variolæ. A Study of Comparative Pathology. Price 1s.

— Practical Horse Shoeing. With 37 illustrations. 2s.

— The Influence of Heredity and Contagion on the Propagation of Tuberculosis. By G. FLEMING, F.R.C.V.S., HERR A. LYDTIN, and M. VAN HERTSEN. Price 6s.

**Gresswell.** A Manual of the Theory and Practice of Equine Medicine. By J. BRODIE GRESSWELL, F.R.C.V.S., and ALBERT GRESSWELL, M.R.C.S. Eng. Second edition, enlarged. Price 10s. 6d.

BY THE SAME AUTHORS.

Equine Hospital Prescriber. Second edition. Price 2s. 6d.

Bovine Prescriber. Second Edition. Price 2s. 6d.

Veterinary Pharmacopœia. Materia Medica and Therapeutics. Price 10s. 6d.

Diseases and Disorders of the Horse. A Treatise on Equine Medicine and Surgery. Price 5s.

**Hill.** Principles and Practice of Bovine Medicine and Surgery, with woodcuts and coloured plates. By J. WOODROFFE HILL, F.R.C.V.S. New edition. *[In preparation.*

— The Management and Diseases of the Dog. By J. W. HILL, F.R.C.V.S. Third edition. Illustrated. Price 7s. 6d.

**Hoare.** Manual of Veterinary Therapeutics. By E. WALLIS HOARE, F.R.C.V.S. *[In the Press.*

**Lambert.** The Germ Theory of Disease, Concisely and Simply Explained. By Colonel JAMES LAMBERT, F.R.C.V.S., Army Veterinary Department. Price 1s.

**Liautard.** Manual of Operative Veterinary Surgery. By A. LIAUTARD, M.D., F.R.C.V.S. 600 illustrations. Price 30s.

— Animal Castration. Price 7s. 6d.

— Lameness of Horses and Diseases of the Locomotor Apparatus. Price 10s. 6d.

**Lupton.** Horses: Sound and Unsound, with the Law relating to Sales and Warranty. By JAMES IRVINE LUPTON, F.R.C.V.S. Price 5s.

**Miller—Tellor.** The Diseases of Live Stock, and their most efficient remedies. A Popular Guide for the Treatment of Horses, Cattle, Cows, Sheep, Swine, Fowls, Dogs, etc. By Wm. B. E. MILLER, D.V.S., President of U.S. Veterinary Association, WILLIS P. HAZARD, A. LIAUTARD, M.D., F.R.C.V.S., and LLOYD V. TELLOR, M.D. New edition. Price 10s. 6d.

**McBride.** Anatomical Outlines of the Horse. By J. A. MCBRIDE, Ph.D., M.R.C.V.S. Third edition. Illustrated. Price 8s. 6d.

**Meyrick.** Stable Management and the Prevention of Diseases among Horses in India. By J. J. MEYRICK, C.B., F.R.C.V.S., Superintendent of Horse Breeding for the Punjab. Price 2s. 6d.

**Poyser.** The Stable Management of Troop Horses in India. "The Collinsian" Prize Essay. By Major R. POYSER, A.V.D., F.R.C.V.S. Price 2s.

**Reynolds.** The Breeding, Rearing, and Management of Draught Horses. By RICHARD REYNOLDS, M.R.C.V.S. Price 3s. 6d.

**Robertson.** A Handbook of the Practice of Equine Medicine. By Wm. ROBERTSON, F.R.C.V.S., late Principal of the Royal Veterinary College, London. Second edition. Price 25s.

**Smith.** A Manual of Veterinary Hygiene. By Captain FREDERICK SMITH, A.V.D., M.R.C.V.S., Professor in the Army Veterinary School, Aldershot. Second edition. Price 10s. 6d.

"The work is a very solid one, and it is a pleasure to recommend it."—*Army and Navy Mag.*  
"It should be on the bookshelf of every horseman, horsekeeper, and veterinary surgeon."—*United Service Gazette.*

— A Manual of Veterinary Physiology. By the same Author. Price 12s. 6d.

"The work will command itself to those for whom it was written by its conciseness and the able manner in which the important facts are dealt with and arranged."—*Lancet.*

"We offer our hearty congratulation to Captain Smith for his welcome contribution to our scanty professional literature."—*Veterinary Journal.*

"A valuable addition to the too small list of good veterinary text-books."—*Journal of Comparative Pathology* (Mac Fadyean).

"We do not remember to have met with a scientific book which is more readable; and it supplies one of the greatest wants in our literature."—*Veterinary Record.*

"This work ought to delight the heart of the veterinary student."—*Nature.*

**Veterinary Diagrams in Tabular Form.** With coloured and plain engravings. Size of sheet 28½ by 22 inches.

No. 1.—The External Form and Elementary Anatomy of the Horse. Price 3s. 6d., or mounted on roller and varnished, 6s. 6d.

No. 2.—The Age of Domestic Animals. Price 2s. 6d., or mounted, 5s. 6d.

No. 3.—The Unsoundnesses and Defects of the Horse. Price 2s. 6d., or mounted, 5s. 6d.

No. 4.—The Shoeing of the Horse, Mule and Ox. Price 2s. 6d., or mounted, 5s. 6d.

No. 5.—The Elementary Anatomy, Points and Butcher's Joints of the Ox. Price 3s. 6d., or mounted, 6s. 6d.

Price per set of Five, 12s.; or mounted, 27s.

NOW READY. Price £6 nett.

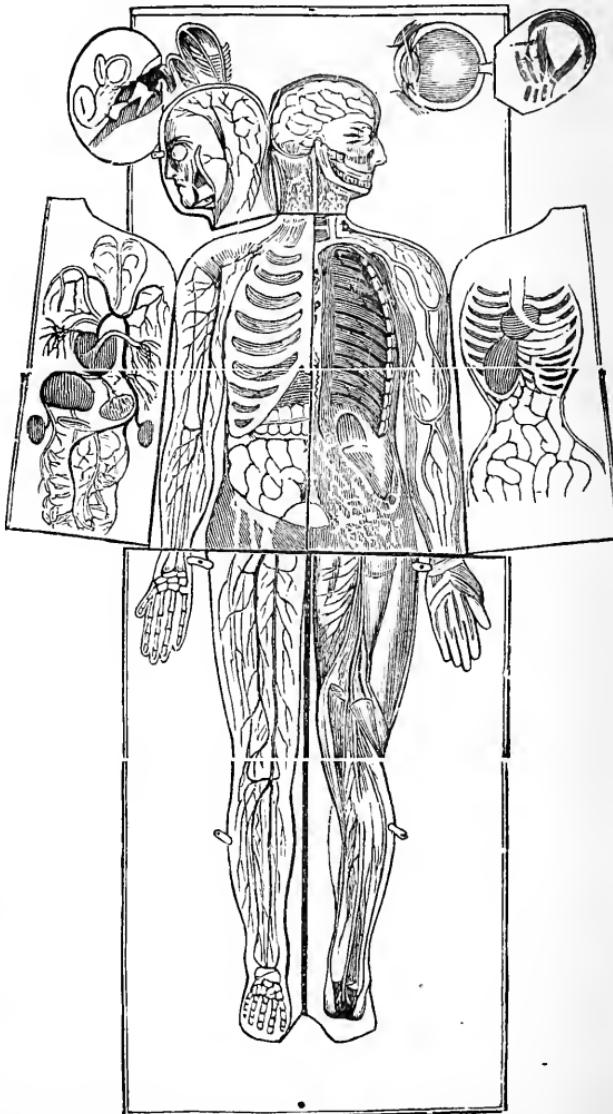
A NEW AND GREATLY IMPROVED EDITION  
OF

WHITE'S PHYSIOLOGICAL MANIKIN.

DESIGNED UNDER THE DIRECTION OF

FRANK H. HAMILTON, M.D., LL.D.

This figure shows exact representations of the various parts as they appear in nature, furnishing practitioners and laymen with correct information and a sure guide in all cases requiring an intimate and thorough acquaintance with Anatomy.



It is full life-size, and folds up in a polished wood case, which, when open, forms an easel. The plates are coloured to nature, mounted on linen and varnished.



COLUMBIA UNIVERSITY LIBRARIES

This book is due on the date indicated below, or at the expiration of a definite period after the date of borrowing, as provided by the library rules or by special arrangement with the Librarian in charge.

J49

RG381

Jessett

... of the ~~—~~

